

THE MONTESSORI SERIES

VOLUME 15

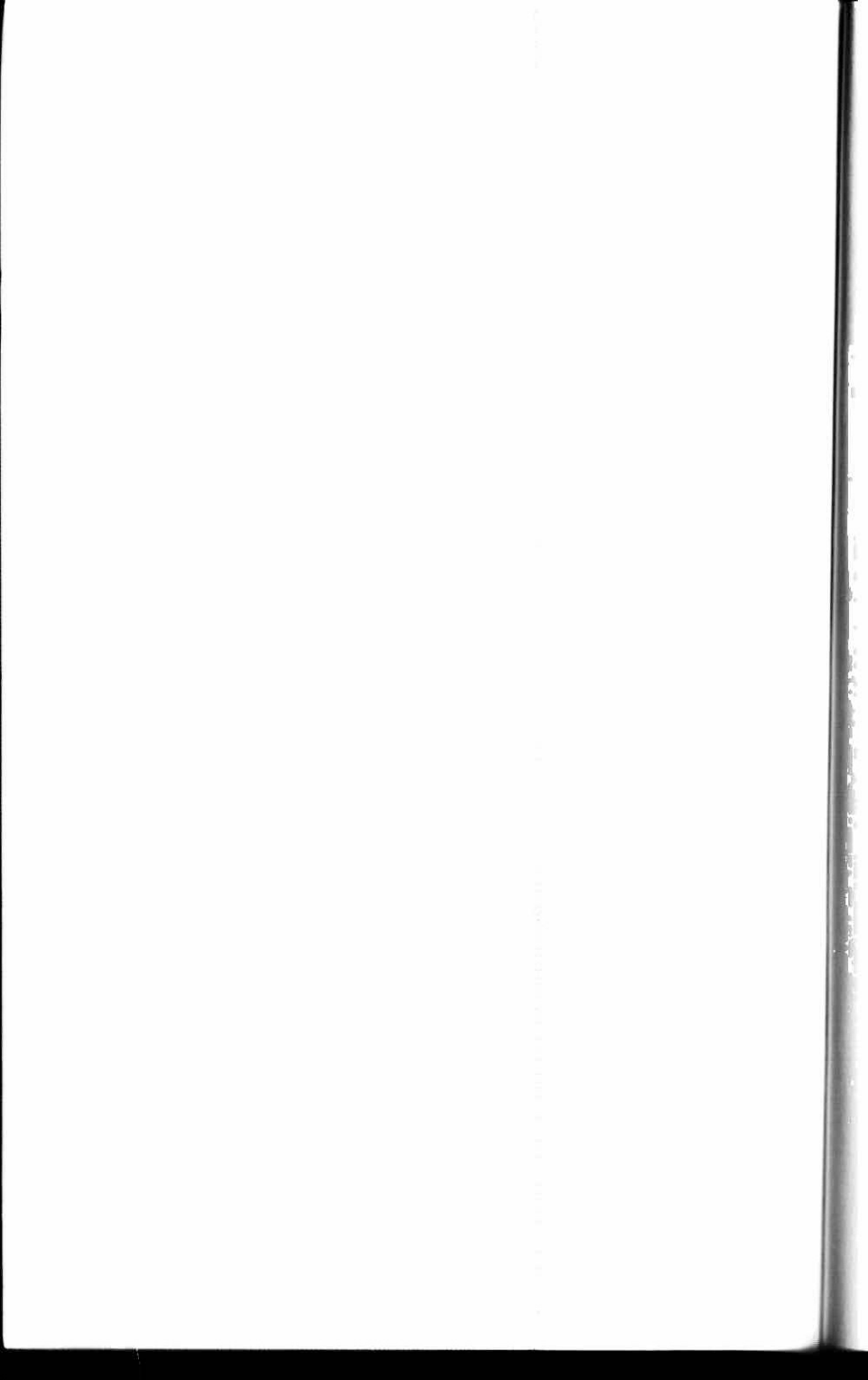
The 1915 California Lectures

Collected Speeches and Writings

Maria Montessori

Maria Montessori

Montessori-Pierson Publishing Company



THE MONTESSORI SERIES
VOLUME 15

The
1915 California
Lectures

Collected Speeches and Writings

Available in the same series:

The Absorbent Mind
The Discovery of the Child
The Formation of Man
What You Should Know about Your Child
Education for a New World
To Educate the Human Potential
The Child, Society and the World
The Child in the Family
The Advanced Montessori Method, Vols. I and II
Education and Peace
Education for Human Development
From Childhood to Adolescence
Basic Ideas of Montessori's Educational Theory
Psychogeometry
The 1946 London Lectures
The 1913 Rome Lectures
The Mass Explained to Children
Psychoarithmetic
Maria Montessori Speaks to Parents
The Secret of Childhood

Some of the titles above are also available in the Spanish language

THE MONTESSORI SERIES

VOLUME 15

The 1915 California Lectures

Collected Speeches and Writings
by

Maria Montessori

Edited by Robert G. Buckenmeyer

Maria Montessori

MONTESSORI-PIERSON PUBLISHING COMPANY
Amsterdam, The Netherlands

© Copyright 1997, Montessori-Pierson Publishing Company

Reprinted 2000, 2008, 2018



The AMI logo is a registered trademark ® of the Association Montessori Internationale.

Formerly known as *The California Lectures of Maria Montessori*, 1915 first published by ABC-CLIO in 1997 with the agreement of Dr. Robert G. Buckenmeyer.

The contents and translation of this edition has been endorsed by the Association Montessori Internationale (AMI).

All rights reserved. No part of this publication may be reproduced, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior permission in writing of the publishers.

ISBN: 978-90-79506-43-9

Montessori-Pierson Publishing Company
Koninginneweg 161, 1075 CN Amsterdam, the Netherlands

Cover design and layout
Van de Manakker, grafische communicatie, Maastricht, the Netherlands
Printed and bound by
Wilco Printing & Binding, Amersfoort, the Netherlands

CONTENTS

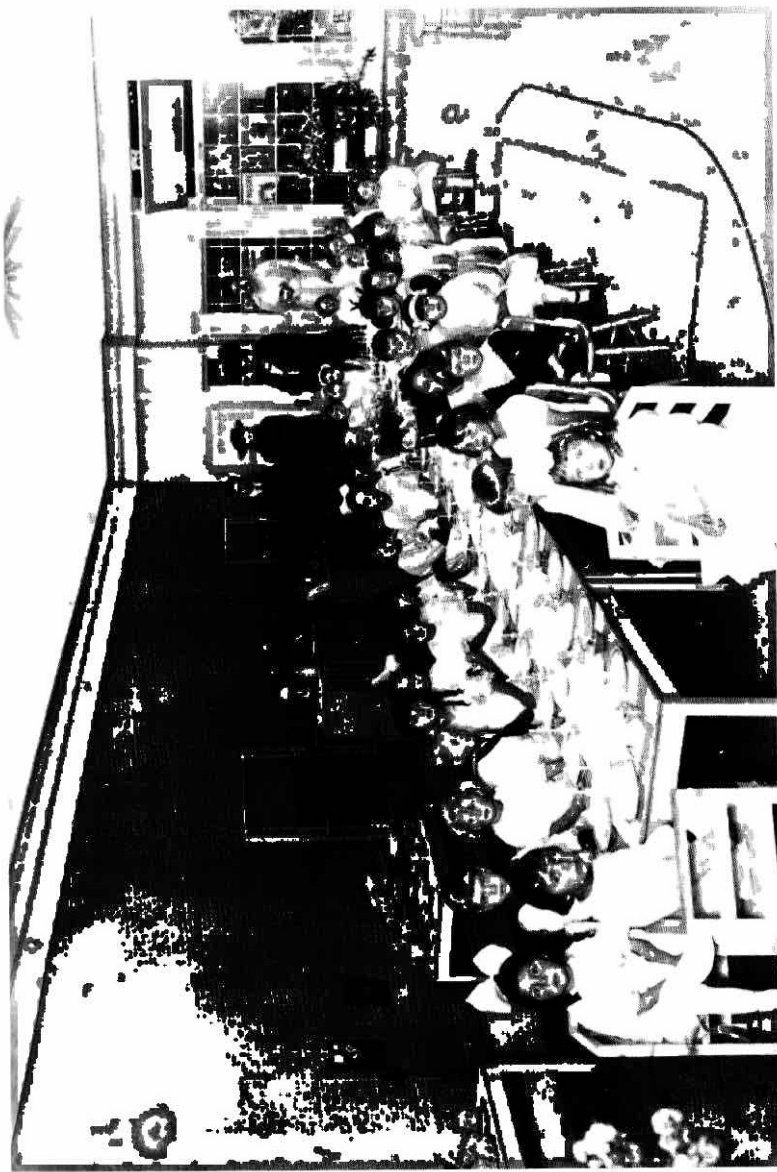
Foreword	vii
Introduction	ix
Acknowledgements	xix

LECTURES

1. Introduction and programme of California lectures	3
2. Los Angeles lectures	6
3. San Diego lectures (and a lesson)	30
4. San Francisco lectures (Panama Pacific International Exposition)	60
5. Oakland lecture	241

NEWSPAPER ARTICLES

6. Introduction	251
7. Articles from the <i>San Francisco Call and Post</i>	258
8. Articles from <i>L'Italia</i> (in English translation)	340



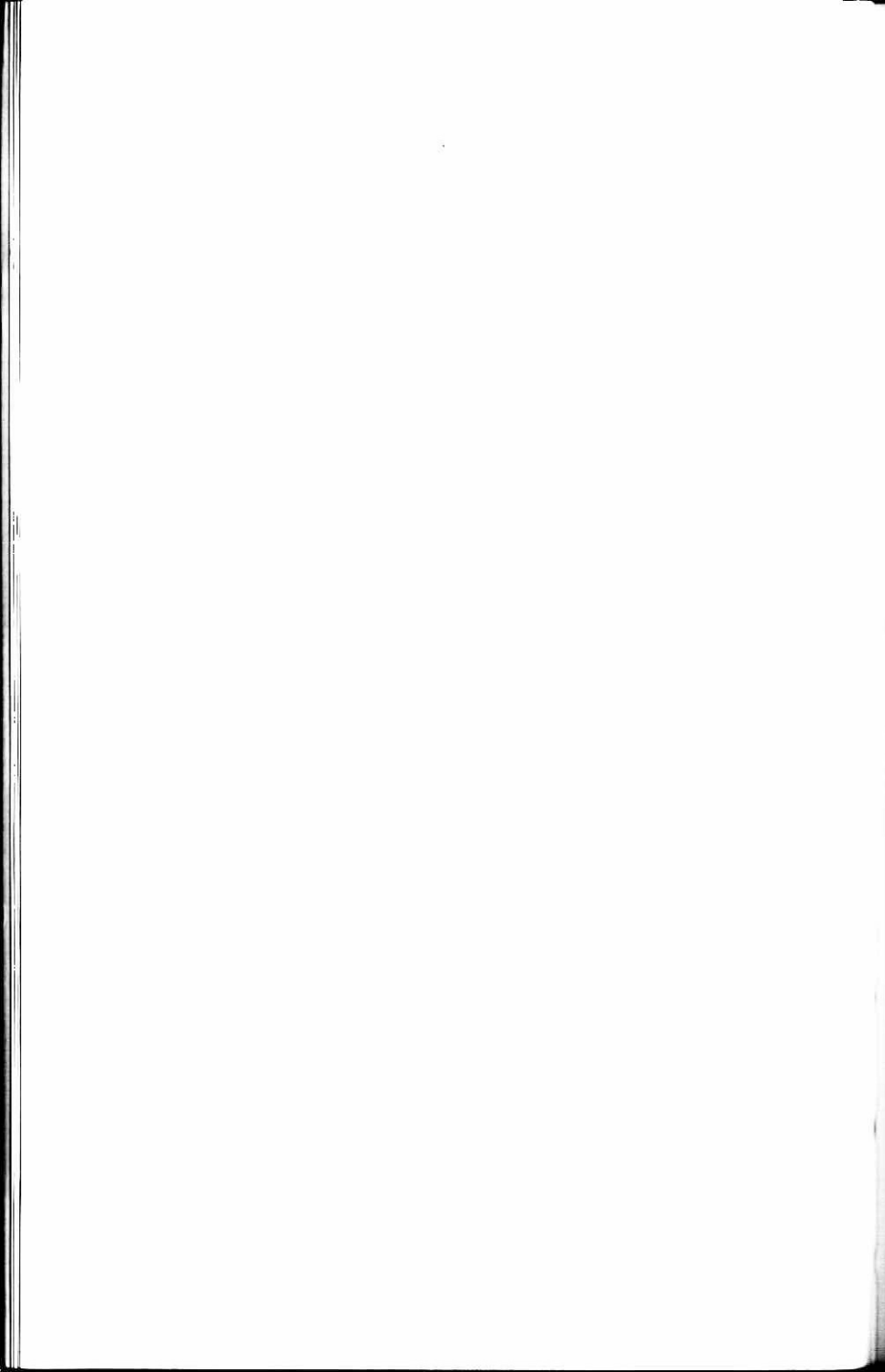
Maria Montessori (standing at the back, third from left, wearing a feathered hat) and children in the glass-walled demonstration classroom in the Palace of Education at the Panama Pacific International Exposition, San Francisco, 1915.

Reproduced from a photograph published in *San Francisco Invites the World: Panama Pacific International Exposition, 1915* (San Francisco: Chronicle Books, 1991), edited by Donna Ewald and Peter Chase. By courtesy of Donna Ewald.

FOREWORD

Although copies of some of the lectures which Maria Montessori delivered in California in 1915 survived for over eighty years, they have remained unpublished and forgotten. In this volume, we publish, for the first time, a number of these lectures, together with several articles which she wrote for local newspapers. The lectures (which were delivered in Italian) and the articles are of historical interest and to some extent reflect contemporary viewpoints which have long been rejected. However, in other respects they represent an important, radical departure from contemporary opinion and discuss educational techniques and health issues concerning children which are only now being popularized by educators and 'discovered' by medical scientists. The lectures were simultaneously translated from Italian into English and recorded by a stenographer as Maria Montessori delivered them. Accordingly, they contain some typographical and grammatical errors and because they were designed to be heard rather than read, cannot be compared stylistically with her written prose. They are reproduced here as important historical documents.

This significant volume will be of value to all those interested in the history of education and the development of Montessori's educational theories and methods.



INTRODUCTION

The Exposition

In 1915 Maria Montessori traveled to California principally to attend the world-renowned Panama Pacific International Exposition (PPIE) which was held in San Francisco between 20 February and 4 December 1915. The PPIE represented an international celebration of the construction of the wonder of the age, the Panama Canal, which was scheduled for completion that very year. The competition to determine where the Exposition was to be held had begun in 1909 and had been characterized by bitter fights at both national and state levels. As early as 19 December 1909, the *Philadelphia Press* had published a major article outlining the fierce competition between Los Angeles, San Diego and San Francisco for the right to host the Exposition. Moreover, the *Portland Telegram* of 3 February 1910 had announced that San Diego had declared 'War Upon Frisco'. Some supporters of San Diego's bid to hold the event claimed that San Diego was the first 'senior' city in California and therefore should automatically be the venue for the Exposition.¹

At the national level Washington, D.C., New Orleans, Louisiana and San Francisco all vied for the right to stage the event. On 27 November 1910 Atlanta's *Georgia Constitution* published an article which defended the right of New Orleans rather than San Francisco to be the site of the international Exposition. The article included two maps, one showing New Orleans as being a hub city to some seventy other cities and to twenty million people throughout the South and East compared to San Francisco, a hub city to only eight cities and one

INTRODUCTION

million people in an equal 900-mile radius. When it was announced that San Francisco was the winner, the *Newark Daily Advocate* of 4 November 1910 stated that San Francisco had bought the location at a cost of \$50 million, compared to only \$35 million offered by New Orleans (as reported in the *Philadelphia Public Ledger*).² The factor which probably tipped the balance in favor of San Francisco was, however, more than money, since California's Republican Senator Perkins chaired the Committee on Naval Affairs which had had jurisdiction over the Panama Canal. In any event, on 12 February 1911 the US Senate unanimously selected San Francisco as the 'Exposition City'. Delegations from all over the world showed a strong desire to set up fair sites but a threat of boycotts emerged because at this time the American Congress was debating new immigration legislation which would require all immigrants to pass an English literacy test as a condition of entrance into the United States.

Maria Montessori at the Panama Pacific International Exposition (PPIE)

Maria Montessori's presence at the PPIE was widely reported in the contemporary California press. She located her demonstration school at the Exposition in San Francisco and gave several series of lectures in the city including those delivered as part of the Exposition, thirteen lectures at the San Francisco Civic Center (between 8 September and 21 October 1915) and twelve talks to parents at the Palace Hotel (between 21 October and 15 November). In addition, she made appearances at the San Diego PPIE Exposition (13 July), lectured in Los Angeles (between 27 May and 29 June) and gave a keynote address to the National Education Association held in Oakland on 16 August. Some kind of advance announcement of her visit to the PPIE must have been made because some 2,500 families applied for their children to attend her demonstration school located in the Palace of Education. Unfortunately, however, the PPIE records available at the San Francisco Public Library History Center and at the Berkeley Bancroft, University of

INTRODUCTION

California Library do not indicate whether her invitation originated from Italy or the United States.

Two San Francisco newspapers, in particular, the *Call-Post* and *L'Italia*, gave her visit major coverage. Between 9 August and 1 October the *Call-Post* published twenty-four articles written by Maria Montessori and translated by Ettore Patrizi, editor of San Francisco's *L'Italia* newspaper. Moreover, between 9 and 28 August *L'Italia* itself published nine more articles written in Italian by Maria Montessori exclusively for its Italian-speaking readership. Other newspaper articles announced the dates and venues of her various lectures.

Although she understood English, Maria Montessori normally lectured in Italian and this was indeed the case when she spoke in California. Her determination to speak Italian may well have been strengthened by the negative reception she received from American public educators. Certainly, none of the many educational conferences which were held at PPIE made any reference to her and she also appears to have been ignored by the contemporary American educational establishment which at this time was, of course, exclusively male. Nonetheless, her general popularity is clear from the favorable coverage she received in both the *Call-Post* and *L'Italia*.

It is interesting to note that two other speakers invited to the PPIE, Professor Charles H. Judd of the University of Chicago and Winifred Sackville Stoner, both Americans, spoke of the same need for the introduction of new teaching methods based on the observation of the child by the teacher.

Who issued the invitation?

Eventually, I returned to the question of who had invited Maria Montessori to PPIE and for what reasons. My search naturally began in San Francisco. Initially I visited the California Academy of Sciences Library, where Karen Elsber, the reference librarian, referred me to the San Francisco History Center in the main San Francisco Library. Here I found very few items relating to Montessori's lectures but I did recover one photograph of her and the children within her

INTRODUCTION

'glass-walled' demonstration classroom (see frontispiece). The History Center reference librarian, Susan Goldstein, then directed me to the Bancroft Library, located behind the Coe, or University of California, Berkeley main library.

The Coe University Library offers an extensive library of California as well as other newspapers and here I made some fascinating discoveries in the form of the San Francisco *Call-Post* and *L'Italia* articles.

Finally, I went to the Bancroft Library and, through the able assistance of two reference librarians, Baiba Strads and Ray Stokes, found that they had one hundred and ninety-one items of PPIE materials. An 'item' could be a box, a ledger or a scrap-book of as many as two hundred pages each. None of the items was accompanied by a complete list of its contents but general references were provided, such as 'PPIE invitations', or 'PPIE newspaper articles'. These sources originated from all over the world and were written in several languages. Although I found many interesting and relevant PPIE items, among which were articles about various educators, I could find no reference to any invitation to Maria Montessori. Nor did the ledgers which contained detailed reports, contracts and financial statements of the organizing committee yield any reference to the source of the invitation.

It should be noted in passing that the Web Home Page of the North American Montessori Teachers' Association (NAMTA) states that 'The committee that brought her [Maria Montessori] to San Francisco included Margaret Wilson, the daughter of the U.S. President Woodrow Wilson'. The committee also included Dr. David Starr Jordan who was President of the National Education Association (NEA). It seems possible that the NEA may have been instrumental in issuing the invitation. Unfortunately, however, the Bancroft materials did not contain any documents which could confirm this.

The PPIE papers at the Bancroft Library contained two small specific Montessori references: one in the day-to-day '1915 - Calendar' cites August 21 as 'Mme. Montessori Day'. However, I have not been able to trace any San Francisco newspaper reports for that day which elaborate on this. A

INTRODUCTION

second reference turned up in Frank Morton Todd's *The Story of the Exposition*, a five-volume work published in 1921. This publication advertises itself as 'Being the Official History of the International Celebration Held at San Francisco in 1915 to Commemorate The Discovery of the Pacific Ocean and The Construction of the Panama Canal'. Within the chapter entitled 'The Story of the Exposition' (pages 386-387), a reference notes that 'November 6, Helen Keller Day, was the occasion of a dinner in honor of Madame Montessori, Helen Keller, and Mrs. John Macey, whose remarkable methods were responsible for some of the famous blind, deaf, and dumb girl's attainments in the Massachusetts Building'. However, the PPIE documents concerning the Massachusetts Building do not provide any further details, and nor do the San Francisco newspapers shed any further light on these events.

Thus the question of who invited Maria Montessori to PPIE and why she came to conduct a demonstration classroom remains a mystery. Only one newspaper article provides a clue as to her possible sponsor. The *San Diego Sun* published an article about a dedication dinner party for dignitaries from California, and from further afield, and listed those who were invited. The list mentioned only male guests but certainly their wives together with Maria Montessori attended. One of the guests was Ernesto Nathan, whom Maria had known as mayor of Rome, and who was now Italian Commissioner to the Exposition. It is conceivable that Nathan may have played some part in inviting Maria. Another of the sponsors listed was the founder and then president of the Bank of America, A.P. Gianini. A search of the Bank of America Archives Division in San Francisco revealed no evidence of Gianini's involvement. However, a student enrolled in one of my classes (a computer systems expert who was employed by the Bank of America) was told by a Bank of America employee of long standing that Gianini had been very much involved in PPIE and had sponsored Maria Montessori's 'glass-walled' demonstration classroom.

This oral testimony is of considerable interest, but in the absence of any authoritative, documentary evidence the

INTRODUCTION

mystery of who invited Maria Montessori must remain unresolved.

The survival of the lectures

The story of how these lectures were originally recorded, how they survived, how they re-emerged and appeared in print is, in itself, truly remarkable. That story begins fifty-three years after Maria Montessori delivered these PPIE lectures in California. In September 1969, I was invited by Elisa Harrison, a member of staff at Notre Dame College, Belmont, California, to attend a graduation celebration at the AMI Teacher Training School located in Palo Alto, which was directed by Lena Wikramaratne. Mario Montessori was to preside and deliver a talk. Eugenia Andriano, who had been Maria Montessori's friend and companion was also to be present. In addition, Edna Andriano, Eugenia's daughter, was to attend. Edna was in fact one of those who had enrolled in Maria Montessori's PPIE lectures.

After Mario Montessori's talk, Edna Andriano introduced me to him as 'a philosophy professor at the University of Santa Clara and an admirer of Maria Montessori'. When he asked me how I came to know his mother and her work, I informed him that one of my students had enquired whether I had ever heard of the Montessori method of teaching. At that stage I knew of it only by reputation, which she found hard to believe, claiming that I used aspects of the method in my philosophy course.

I told Mario that the student had aroused my interest and that soon afterwards I heard of the Montessori Training Institute, directed by Sister Christine Marie at Notre Dame College, Belmont, California, and had decided to enroll. There, I had met Elisa Harrison, who was responsible both for teaching Montessori and Piaget courses and for directing the graduate students in working with Montessori materials during the daily classroom practice. Elisa, in turn, had introduced me to Edna and Eugenia Andriano. I had had many long conversations with the Andrianos and Elisa Harrison about Maria Montessori's educational beliefs and, as a result, Elisa had invited me to Palo Alto that day to hear Mario speak.

INTRODUCTION

We then all entered into a discussion about Maria and her teaching method and Mario asked whether I would write an article for the AMI journal to celebrate the twentieth anniversary of his mother's death. I hesitated, because at that time I had only been enrolled at the Notre Dame Institute for a couple of months (although my article was eventually published). Later, Edna and Elisa Harrison remarked that this was the first time, to their knowledge, that Mario had asked an American scholar to write an article about his mother. They told me that this was probably because American 'male' educators had largely rejected Maria Montessori as a 'professional' teacher because she was an Italian, a Catholic, a medical doctor, and a woman.

During the course of the conversation with Mario, Edna asked him if she might provide me with the copies of the lectures which his mother had delivered in California in 1915. These had been given to Edna by Adelia Pyle³, Maria Montessori's friend during PPIE. Mario agreed, and commented that not even he had copies, or had read them. Later that evening, Edna gave me the lectures which were carefully wrapped in a red ribbon and tied in a large bow. The copies had been typed in blue and the pages were frayed and crumbling at the edges. Edna and Elisa told me that Adelia Pyle had acted as a stenographer and had actually typed the lectures whilst they were being delivered.

It was apparent that the tissue sheets on which the lectures were typed were desiccating, and arrangements were therefore made to photocopy them. Once this task had been completed I interviewed the Andrianos and Elisa Harrison (who later died of cancer), for I had many questions relating to the lectures. This taped interview was very useful in helping me to gain a fuller understanding of the lectures.

The lectures: a learner taught by children

The popularity of Maria Montessori's method of educating children through the free use of manipulative materials within a planned environment is well known, but equally fascinating is

INTRODUCTION

the unique insight which underpinned her beliefs, which is admirably illustrated in these lectures and articles. Montessori's method is entirely conditioned by her attitude towards children. Margot R. Waltuch quotes Montessori as saying:⁴

When I am in the midst of children, I do not think of myself as a scientist, an observer, or a theorist. I am **NOBODY** – and the greatest privilege I have when I approach them is being able to forget that I even exist – for this has enabled me to see things that one would miss, if we were somebody – little things, simple, but very precious truths.

As I edited these lectures and articles, I was impressed by their simplicity and originality. As Waltuch comments:⁵

Montessori's treatment of a theme was brilliant; her delivery faultless. She never wrote her oral presentation down; she never gave the same lecture twice ... whenever Montessori spoke, she made it seem so simple, giving very little indication as to how complex her ideas really were.

Recent scientific studies have suggested that there is an increased growth of the nerve pathways within the brains of newborn and young children whose environments have been characterized by oral and manipulative stimulation. Some contemporary psychologists have observed that children learn languages more easily at a young age, the ideal age being considered to be about eight years old. However, for decades children taught by the Montessori method have successfully begun to learn different languages as early as three years of age. Indeed, one of the *L'Italia* articles, reproduced here, illustrates this very point. None of these 'latest' scientific findings are new, as these 1915 California lectures and articles demonstrate. Moreover, it should be remembered that Maria Montessori, although she had degrees in medicine and psychology, did not have the advantage of the medical technology which is available today.

In three of the San Francisco lectures Montessori warns newly pregnant women to be careful about diet and not to

INTRODUCTION

drink alcohol or smoke in view of the damage this could cause to the fetus. In addition, Montessori stresses that pregnant women should be aware that sound also affects the fetus, and that they must therefore talk and sing to their unborn child. It is astounding that Maria Montessori made these discoveries almost a hundred years ago.

In the sixth of the *L'Italia* articles, for example, Montessori outlines the chief cause of underachievement as being what she calls 'slavery'. This 'slavery', she maintains, manifests itself in two principal ways within the learning environment. The first is the child's desk, the second is the teacher. In 1915 such arguments were nothing short of revolutionary. In the *L'Italia* article she reiterates that the '... fundamental principle of my method is to leave to children the widest individual liberty in order not to impede in any way the spontaneous development of their actions'. For an American, predominantly Protestant, audience, to whom the phrase 'Do as I say not as I do' was axiomatic, such views challenged every tenet of their beliefs concerning the upbringing of children.

The eighth *L'Italia* article continues this theme and provides a glimpse of what Montessori calls her 'new concept of discipline', i.e. not to teach children that immobility is good and activity is bad. This concept, which stands in sharp contrast to the almost universally held belief at this time that children were to be 'seen and not heard', is central to the Montessori method, and one hundred years later, is of course widely accepted.

Most teachers and parents approach the education of their students and children with the best of intentions, but unfortunately decide in advance not only how, but also what, their children should learn. Such an attitude, however, often prevents children from learning, and is, indeed, counterproductive, frequently frustrating parents, teachers and students alike. Children will usually resent forced instruction and, if this persists, will lose their intellectual curiosity altogether. In the lectures and articles reproduced here, Maria Montessori repeatedly challenges this method of forced education and invites teachers and parents to reconsider their attitude to children and the learning process.

INTRODUCTION

Maria Montessori was a unique teacher because she saw the children in her various *Casa dei Bambini* schools not as students to be taught but as sources of inspiration capable of teaching her. At the heart of her California lectures and articles is a call for a radical change in teachers' attitudes. 'The point', she states, 'is that the teacher must not learn a new method, but must acquire new attitudes' (see San Francisco lecture, 6 August).

Montessori wastes no time making the attributes of her 'new type of teacher' clear to this American audience. She states that 'her virtue consists in never interrupting the work of the child [while] at the same time, giving help where she sees that help is necessary'. Elsewhere in this lecture, Maria Montessori emphasizes these points very succinctly:

The more the teacher has been able to lose or forget her old position the more able she will be to become a good teacher in this method. Another thing which she must learn is to be quiet, because she must not give lessons and, therefore, she must not give discourses. That is much more difficult than to learn to talk – one learns only after long practice ... Another thing which the teacher must learn is to contain, to hold back the impulse to intervene, to counsel or to advise. This is a most difficult thing to learn ... The greatest height of the ability of the teacher will be attained when she has reached that point where the children can work entirely alone, without her help in any way.

In the same lecture, Maria Montessori recounts a simple story to illustrate her concept of the new teacher:

One of the children who had learned to write and was at the height of his joy because of his ability to write went to the teacher and said to her, 'Signorina, do you know how to write too?' The teacher had succeeded in directing and developing and knew how to hide this to the greatest extent possible; such is the most important, the very greatest triumph of a method which has as its principle, the liberty, the development of the individual child.

INTRODUCTION

This story admirably conveys the essence of Maria Montessori's child-centered philosophy of education, which is clarified and expanded so expertly in this series of historically important lectures and articles.

Acknowledgements

This book would never have seen the light of day without the help and goodwill of Mario Montessori, who allowed the lectures to come into my possession, and the invaluable support of Edna and Andrea Andriano, and Elisa Harrison. In addition, of course, appropriate thanks are due to ABC-CLIO Limited and the patient encouragement of Dr. Robert G. Neville.

Several librarians were generous in providing me with source materials and helpful information. In San Francisco, I would particularly like to mention: Karen Elsber, California Academy of Sciences Library; Susan Goldstein and Pat Akre, San Francisco Archives and History Center; and Baiba Strads and Ray Stokes, Bancroft Library, University of California, Berkeley. Thanks also to Donna Ewald for the photograph of Maria Montessori with the children in the glass-walled classroom at PPIE and also to Robert F. Buckenmeyer, President, United Digital Color, San Francisco for his help in capturing this image on disk.

The encouragement of friends, Elena Heil and Olga McAdam and also the kind assistance of Fr. Aurelio Villa, O.F.M. in translating many of the articles all contributed in time of need.

Thanks also to my loving wife who met my fits of frustration with quiet suggestions.

Finally, I would like to dedicate this work to Maria Montessori, a woman so far ahead of her time. Would that all educators might share her passion for observation and her love of children.

1. San Francisco *Chronicle*, 25 September 1913 and San Diego *Herald*, 9 July 1914.

2. Bearing in mind the fact that \$100 in 1915 is equivalent to about \$3,000 in 1997, the costs of staging the PPIE were enormous.

INTRODUCTION

3. Dorothy M. Gaudiose, author of the recently published *Mary's House* states that Adelia Pyle was born in Morristown, New Jersey, 17 April 1888, to James Tolman Pyle and Adelaide McAlpine Pyle and christened in the local Presbyterian church. After preparation and instruction under a Jesuit priest, in 1913 Adelia Pyle was baptized a Catholic and took the name of *Mary*. Thus, when she translated Maria Montessori's lectures in San Francisco, she was known as Mary Pyle. Edna Andriano also verified Adelia Pyle's name to be *Mary Pyle* in a letter dated 28 July 1997 to the editor.

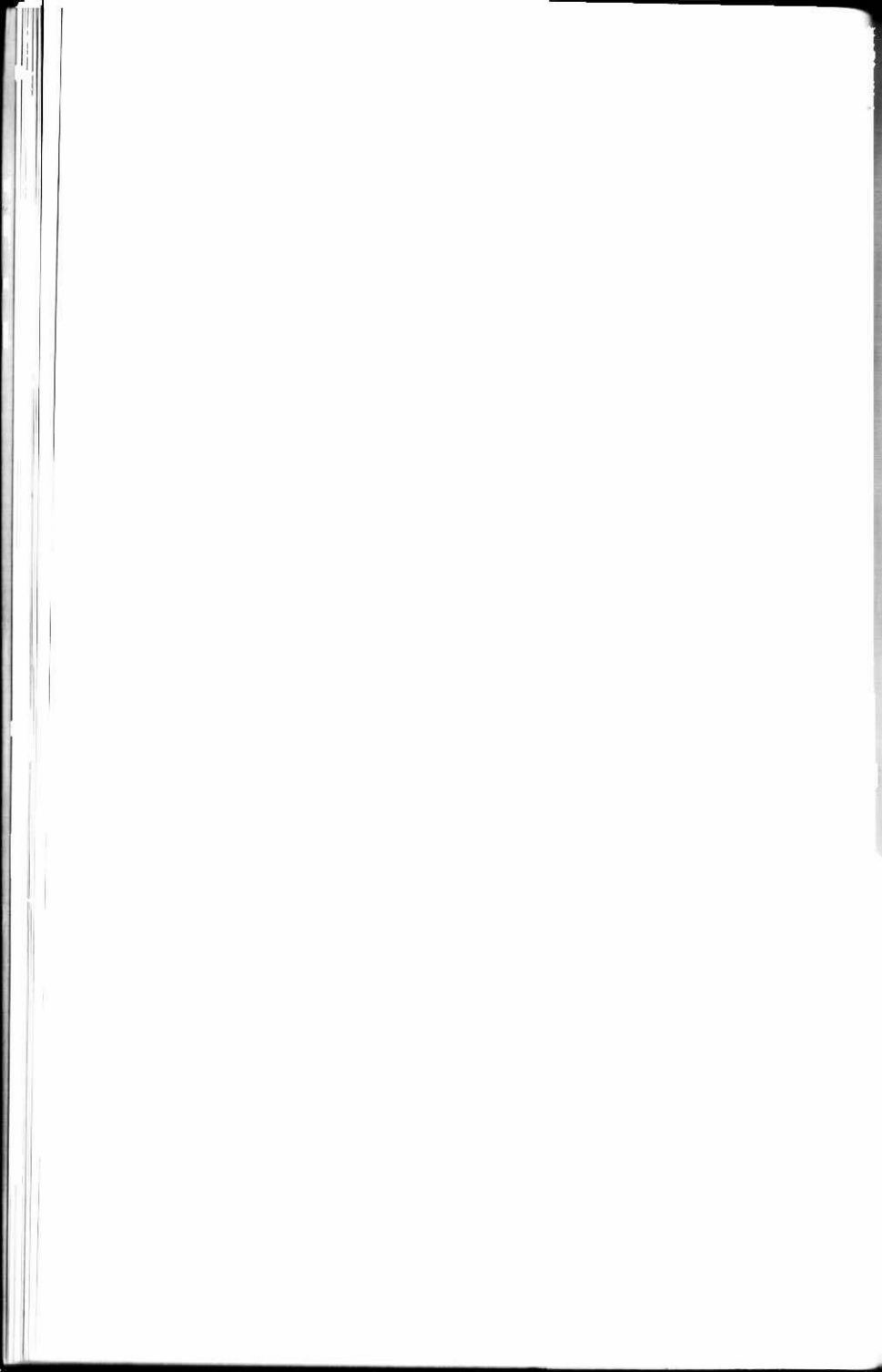
4 Margot R. Waltuch, *A Montessori Album* (NAMTA, 1986), p. 3.

5 *Ibid.*, p. 4.

Robert G. Buckenmeyer

Sonoma, California, May 1997

Lectures



1

Introduction and programme of California lectures

Introduction

Maria Montessori lectured in California between 7 May and 22 September 1915. The versions in this volume are as transcribed and typed by Adelia Pyle. The critical editions have been produced by Dr. Robert G. Buckenmeyer.

In order to put the work into context we first show where and when these lectures were given and add a short note on the topic of each.

Programme of lectures

Location	Date	Topic
6 Los Angeles 1	7 May 1915	History and growth of Montessori's method
11 Los Angeles 2	12 May 1915	Introduction to the Montessori materials
15 Los Angeles 3, 4	{ 27 May 1915 9 June 1915	{ Social conditions and the child
13 Los Angeles 5	10 June 1915	The social rights of the child and the <i>Casa dei Bambini</i> , Rome, Italy
10 San Diego 1	14 July 1915	The ordered learning environment and the spontaneous activity of the child
40 San Diego 2	19 July 1915 ¹	The ordered learning environment and the imagination of the child
61 San Diego	19 July 1915	The imagination

CALIFORNIA LECTURES

<i>Location</i>	<i>Date</i>	<i>Topic</i>
60-240 San Francisco	6 August-22 September 1915 ²	
241 Oakland	28 August 1915	Montessori's address to N.E.A. national meeting: Learning and developmental freedom of the child

1. The text of a lesson given in San Diego on 19 July is also included.
2. The detailed list of lectures in San Francisco is given separately below.

<i>Lecture</i>	<i>Date</i>	<i>Topic</i>
60 First	6 August 1915	Description of the Montessori teacher, new and scientific Presentation of numbers, zero to ten (0-10), red rods, sandpaper numbers
69 Second	7 August 1915	
75 Fourth*	9 August 1915	
84 Fifth	12 August 1915	Measurement of the child's physical growth, the biographical chart
92 Sixth	13 August 1915	Measurement of the child's physical growth, the biological chart
101 Seventh	14 August 1915	Measurement of the child's whole life, the biological chart
113 Eighth	19 August 1915	Measurement of the child's physical growth and conditions within which the child lives
127 Ninth	21 August 1915	Anthropological materials for measuring the child's growth
138 Tenth	25 August 1915	The psychological study of the child and the biological chart

INTRODUCTION AND PROGRAMME

<i>Lecture</i>	<i>Date</i>	<i>Topic</i>
148 Eleventh	26 August 1915	The psychic research in the biological chart: observation of the child and the method of education
160 Twelfth	1 September 1915	The biology of the child and the method of education
169 Thirteenth	4 September 1915	Cylinders and the perception of the child
177 Fourteenth	6 September 1915	Color and the sensorial discrimination of the child
191 Fifteenth	8 September 1915	Sensorial exercises and the isolation of the child's senses
197 Sixteenth	10 September 1915	Sensorial exercises and the child's tactile and intellectual perceptions
195 Seventeenth	13 September 1915	Sensorial exercises as the organizing means for the child's inner life
204 Eighteenth	14 September 1915	Preparation of the learning environment and the child's growth in learning
213 Nineteenth	17 September 1915	Movement and the child's learning
224 Twentieth	20 September 1915	Sense perceptions and the spiritual growth of the child
233 Twenty-first	22 September 1915	The teacher's use of sensory materials to attract the child's attention and to facilitate growth in learning

* No third lecture is so marked, but both Fourth and Third appear on the one marked Fourth. Thus, she gave twenty lectures.

Note: Dates in newspaper and on 'typed' copies do not always agree. It is, however, unclear where the error lies or whether perhaps Dr. Montessori gave additional lectures.

241 twenty-eight 28 August 1915 Oakland Lecture

Los Angeles lectures

The history and growth of Montessori's method

Lecture 1: 7 May 1915

Four courses have already been given for the preparation of teachers in this method, two for Italian teachers and two International training courses. The first course was given in 1909 and the first International course was given in 1913. The following nations were represented at the two International training courses given in the years 1913 and 1914: Europe: England, France, Switzerland, Spain, Germany, Austria, Poland, Russia, Romania, Holland, Denmark and Italy; outside of Europe: Australia, Canada, Panama, India, Japan, South Africa, Philippines and the United States.

The first edition of the book *Montessori Method* was published in Italy in 1909¹ and is now printed in ten languages: Italian, English, French, German, Spanish, Russian, Polish, Romanian, Japanese and Chinese. The didactic material used for the development of the children is manufactured in: Milan, Italy; London, England; New York, United States; Berlin, Germany; and China.

The school in which this method was born was founded in 1907 and the method was established in 1908 for children from three (3) to six (6) years of age.² It was based upon the previous work of ten (10) years with deficient children³. It is this first part of the work which is known as the Montessori method but since the year 1910, owing to the good results obtained with the little children, the experiments were carried

LOS ANGELES

on with older children in the elementary work. This work has been carried on for four (4) years but as yet has not been shown to the public.

The elementary work with the children from six (6) to ten (10) years of age enters into a period of greater public interest because it touches the period of obligatory education. In Italy, it completes a cycle as it covers the entire period of obligatory education. The fact that the same method of education has been applied to the children up to ten (10) years of age proves that this is not merely a new method to take the place of the kindergarten for little children from three (3) to six (6) years of age, but an entirely new method of education. It is so true that this is a new method for all education that experiments are now being carried out to reform the intermediate studies such as Latin, Versification, Literature and so forth.

In spite of the fact that the kindergarten has been established for many years for little children of a fixed age group, no one has ever considered educating children either previous to or after that age. Indeed, the advisability of educating children at all before the age of eight (8) years remains a question still discussed by many; so these children have been left to rest absolutely. On the other hand, although this method has been applied for only a short time, it has not only proved itself useful for children from three (3) to six (6) and for older children, but parents have forced the teachers to take in children of two and two and a half and mothers plead for a corresponding method of educating babies of one year.

This method is not only a method for the instruction of children, but contains principles of the hygiene for life. Because of this it cannot simply refer to one period in the growth of the child, but to the whole of human life.

One of the ways in which my method differs from other methods is in relation to fatigue. Whereas fatigue comes as a result of application in school when the child works, the child feels rested in our method and there is within him a development and increase of force. This difference may be compared to that which exists in physical life between the muscular work of a laborer forced to work and that of a laborer who works freely. Forced work tires him and consumes his strength

CALIFORNIA LECTURES

whereas the free labor of a boy who is doing gymnastic exercise rests and strengthens him. We cannot consider a development of forces where children exist in immobility.

When we say that the child should rest psychically up to the age of eight (8) years without doing anything, it is as though we said that the child up to the age of eight years should not move a muscle in his physical life. But such is an absurdity, because a child who did not move a muscle up to the age of eight (8) years would become paralysed and not strong. So, in psychic life rest does not consist in immobility and inactivity.

It is impossible for the child not to work psychically. In order not to work, it would be necessary for the child to sleep from the time it was born until it was eight (8) years old. The abandoned child, on the other hand, works, but in a disordered manner because he has to make an inconceivable effort in order to learn things by himself and to get to know the world – to learn the language, and so forth. This is what is called rest for the child up to eight (8) years of age!

Therefore, we can admit that we must help the child in this great work in life and that it is possible to give an order to his efforts with a method which helps him to go ahead more vigorously and more restfully towards that end to which he is directed. Here, therefore, we see rising before us a kind of psychic-hygiene which helps to guide and order life. This hygiene will consist in developing the intelligence, will and character, not in the application of them. I know that you object to this, saying that it is nothing new but that this is the aim in all pedagogy, in all the philosophical and pedagogical development from the earliest days up to the present. This has also been the aim for the body since the time when people first said 'a healthy mind in a healthy body'.

But I will demonstrate in my course of lectures that, up to the present time, others have only said these things without applying them practically. Now you must not take my affirmation as truth, but must judge for yourselves by what you see the children doing. Between the ideal and possibility of its realization, there is a great difference. The ideal cannot be united to the aspiration without long and tedious work. A person who aspires to be a millionaire is far from one who has

LOS ANGELES

worked hard and acquired the millions. So also, a great difference exists between the ideal and the possibility of saving life. How many people, for example, have prayed for help against infectious diseases? How many mothers have invoked this succor for their children whose mortality was comparable to an eternal slaughter of the innocents. But, it was the discovery of the microscope and the knowledge that there were little *infusori* moving in the water which was needed in order to imagine that there existed infinitesimal beings and that perhaps infectious diseases were derived from them. Only then did doctors begin to study these infinitesimal beings in order to cure these diseases. Therefore, a great work of scientists who made positive studies occurred between the ideal and the realization. This is the secret – after these studies had been made in the intimacy of laboratories all people took part in a great life-saving work. All changed their mode of living – cities changed their aspect and the aim arose not only to escape death, but to fortify life itself. All men embraced this idea for utilizing life in the best possible way.

This is why hygiene has become a social question. Hygiene has taught all men how they must eat, sleep and live. If we have houses with gardens, schools with large windows, school in the open air, great industries for the preparation of rational feeding for children, if there exist special government officers for the defense of the State against the most remote danger of infectious diseases, then all of these things we owe primarily to the discovery of the microscope.

The way we look at the doctor has been entirely changed since positive science has taught us how to save humanity. The old-fashioned doctor was at the same time a phlebotomist, a pedicure, and so forth, and was much impressed with his own importance, but he was not regarded with the same solemn and serene awe as the modern doctor who seems to be a real pontifex of life. When someone becomes not ideally, but really useful, then he becomes highly respected in whatever he does. The doctor is he who takes the highest and the most important studies.

Yet the doctor occupies himself with matters which decency prevent one from discussing in public. For instance, Koch, to whom the whole world is grateful, took for his studies *sputum*

CALIFORNIA LECTURES

- very revolting to think of. But all those who were in anguish of suffering turned to him as though to a god hoping to receive life from him. So we now know that doctors make their diagnoses from bodily excretions and the child specialist occupies himself only with the sick body. We must say because of this that the elevation of man does not depend upon the material work but upon the utility of this work for the world. If it is known that a man knows the truth about an excretion of the body, his fame becomes much greater than that of one who makes philosophy without first touching the truth. It ought to make a deep impression to observe the doctor at his greatest elevation in this period of extraordinary refinement.

But, why has the teacher who occupies himself with the finest part of the child, less dignity than the doctor? In this time, would it not be logical to put the teacher in the place of the doctor and remove the doctor altogether. This makes me think that whereas the doctor has touched the truth, it has not been touched by the teacher. If in fact the teacher had touched the truth, to what height might he not have attained? If instead he is, as we have said, lower than the doctor, this shows that the teacher follows an ideal but has not realized it and that between his ideal and its realization there is still much work to be done.

1. The book in question was published by Maria Montessori in 1909 and entitled as translated into English was: *Scientific Pedagogy as Applied to Child Education in the Children's Houses*. The short title under which it was published in the United States in 1912, with an introduction by J. McV. Hunt, was: *The Montessori Method* (Schocken Books, New York, 1964).
2. This is the *Casa dei Bambini* founded originally in the Quarter of San Lorenzo, Rome at the request of Erdoardo Talamo, Director General of the Roman Association for Good Building. As Montessori comments: 'It was Signor Talamo's happy idea to gather together in a large room all the little ones between the ages of three and seven belonging to the families living in the tenement' (*Montessori Method*, p. 43). Thus, the first *Casa dei Bambini* '... opened on the sixth of January, 1907, at 58 Via dei Masi'. (p. 43)
3. Montessori states that while she was assistant doctor at the Psychiatric Clinic of the University of Rome she had the '... occasion to frequent the insane asylums to study the sick and to select subjects for the clinics'. Thus, she became interested in '... the idiot children who were at that time housed in the general insane asylums'. (p. 31) The date, about 1898, coincides with the 1909 date *The Montessori Method* was originally published.

LOS ANGELES

Characteristics of Montessori materials

Lecture 2: 12 May 1915

These two lectures will give a brief presentation of the material which the following course will study part by part. This first presentation will help you to understand the work of the children whom you are observing.

The didactic material forms a very important part of the method. This material might resemble the didactic material used in other methods, but it is necessary to understand some fundamental properties (which make my materials different). Although later we will talk at length on this subject, it is advisable for you to note and remember these differentiating qualities.

I The principal quality of my material is to attract the attention of the child and to provoke a permanent reaction within the child. We must consider this material as reactive and, therefore, give special attention to the reaction of the child to the material. This quality already makes this material differ from other materials because other materials serve as a help to the teacher for teaching certain given things or for leading the child to certain given ideas (which the teacher has decided the child must learn). This material, on the contrary, acts directly on the child and the child responds according to his inner activities to the material. This material tends to eliminate the teacher and because of this gives liberty to the child. Such liberation of the child to learn is the principal characteristic of this method. This material liberates the inner life of the child from (dependence upon) another person, that is, the person of the teacher. So, this material allows liberty to be realized in the school.

II (The next quality) of my material is that it is systematic. All the objects are connected in a series and together form a material of development. Thus, when the child reacts with his inner life, not only is a system of ideas developed, but he is doing a great inner work. This system, for example, which serves children of three (3) to six (6) years of age, leads to reading and writing, as well as other things. Having systematic material gives one order in the development of the child without (externally set

CALIFORNIA LECTURES

instructional) programs. Therefore, the child's life is liberated from (such) programs, often arbitrary programs which impede and prevent the free intellectual development of the child.

III (The third quality) of my material is that it contains (what I call) the control of error. As the child uses the material, the material shows the child his mistakes and, in this free path, the child can correct these errors. Therefore, this material not only develops the child's activities in the intellectual sense, but also in the moral sense. The child becomes accustomed to correcting his own mistakes so this (self-correction) becomes a habit of life. This also liberates him from unfavorable and discouraging criticism of others and develops in him the sense of (self-) criticism.

IV Besides these characteristics or qualities of a psychological order, my materials have characteristics of a practical order. These materials are qualitatively and quantitatively determined, that is, the qualities and quantities observed within the materials have been determined to be neither more nor less. If they were less, they would not be sufficient for the development of the child; if they were more, they would be superfluous and would disturb the development of the child.

An example within the mathematical materials would be the red and blue rods. Two sets of rods, one red, the other red and blue are sufficient for the child to learn the differences between the numbers one to ten. The red rods are of one color, each rod of a single dimension and each rod one dimension more than the former rod, the first, one dimension, the second twice that dimension, the third, one dimension more than twice and so forth. This way the child both sees and feels the differences between numbers from one to ten. The red is a single color which attracts, yet does not distract, the child from this discovery of difference. Then, the second set of rods continues with the red color, but alternates with blue so that the child can see the progression of one to two, to three and so forth up to ten. The first rod is red, the second has a red length equal to the first and adds a blue length equal in size so the child may see and feel the progression of number one to

LOS ANGELES

number two, and so forth. Thus, the red and the blue rod sets are mathematical materials which I have determined to be neither more nor less, that is, both qualitatively and quantitatively determined.¹

V A second characteristic of the practical order is that this material has been determined in quality and quantity by experiment, that is, through use by the children.² This is the reason this material differs essentially from other materials which are elaborated by the minds of pedagogues for the use of the children. Here, in these materials, pedagogues do not exist; here, the experimental use by the children has determined the quality and quantity of the material. Who formed this material did not give the content but was able to discover the content because of the capacity of experimenting and observing how children used it. To finish we will consider a characteristic quality of this material, one which is practical and economic.

VI A third characteristic is that there must be many copies of the material in one class in the ordinary school in order that each child can work individually with the material. It is inconceivable that one copy of the material may serve for the individual work of the whole class here as it does in the *Casa dei Bambini*. But this is possible in the *Casa Dei Bambini* because the children do work together, but not with the material. The children apply themselves to different works and this makes the material economic. This would otherwise be impossible to apply. This makes the material economic and, at the same time, corresponds to the principle of liberty because it permits the child, having chosen his own work, to develop himself freely according to his inner life.

1. This paragraph providing a practical example of Montessori's meaning is not in the original text of her speech, but is an editorial addition to permit understanding of the meaning of this characteristic of the practical order which she claimed for her materials.

2. Again, this 'that is, through the use of the children' is an editorial addition to facilitate the understanding of Montessori's point in this lecture. Elsewhere, in the *Montessori Method*, Montessori states that she, in cooperation with a carpenter friend, formed each of these materials as a result of the children's use of the initial material, whether sandpaper letters, numbers, cylinder blocks, red and blue rods and so forth. Montessori would introduce a material

CALIFORNIA LECTURES

designed after her suggestion by the carpenter originally into the psychiatric ward of the University of Rome hospital, then into the *Casa dei Bambini*, then Montessori would observe the child's reaction to the introduced material. This observation of the child's reaction is the 'experimentation' which Montessori designates. Two things are important here; first, Montessori introduced the scientific technique of observation and experimentation into the making of learning materials, in imitation of Itard and Séguin and consistent with her medical training. Secondly, just as nature, so here the children reacted to these materials and decided whether or not and how they were to become part of their world of learning.

LOS ANGELES

The social liberation of the child

Lectures 3, 4: 27 May, 9 June 1915

Besides the technique¹ of the method, its theoretical parts are also of interest. The liberty of the child is not the only criterion which applies to the technique of education, it also applies to the social side, or social liberation. Where other forms of liberation of the child have sprung up without the aid of science, the liberation of the child depends almost entirely on science.

The history of the liberation of man is not the history of love. It is rather the story of intellectual light which comes suddenly with a vision of new directions, new rights. Love is not the only light; if love is not illuminated by intelligence, it may fail to liberate because love is not conscious of (an actual) subjugation. To make clear the concept that love is not enough to see and understand the rights and needs of others, we offer the example of the history of the physical liberations of the child. We begin with a time recently passed. Then, many of the means for protecting the physical life of the child were not known. The child learned to walk as a lame person walks, with the aid of a crutch. When the chair on which the child was sitting was removed, the child fell so often that parents made the child a rubber cap to protect his head. So, children came to walk through two novitiates, namely, a novitiate of lame and a novitiate of wounded people.

We are in the same stage of preoccupation in regard to the psychic development of the child. Our preoccupation is how to make the child intelligent, how to develop his imagination, how to cultivate his memory and how to give him an upright character. We feel the same responsibility as those past mothers felt as to how to straighten the child (physically)². Through love the mother noticed the difference between the child and herself; she wanted to bring the child to the point she had reached. But, she did not notice the more serious troubles which came to the child. Then science studied infant mortality and has brought to life the science of child hygiene because the need existed a long time before special attention was given to children. The fact of infant mortality made them think human life of less value rather than making them fight against infant

CALIFORNIA LECTURES

mortality. But, when statistics showed the numbers of infants dying (and how they died), then the science of child hygiene sprang up. The first discoveries were so simple that they made people marvel. Science found that the chief causes of infant mortality were: lack of cleanliness and bad nourishment.

When the mother fed the child irregularly, (that feeding) was (out of mere sentiment), that is, she fed the baby when it cried. Now, we can see how easy it is for sentiment to make a mistake. We have only to put ourselves in the place of the child and to think, 'What if I had to eat like a child'. If a child cries with indigestion, she feeds it more and it has to (endure) another meal. Or, the mother nurses it continually to quiet it. But, we must realize that the child's immunity to disease is less than ours. Microbes grow more easily in the child's intestines than in ours. Mothers, however, did not think to disinfect the child's mouth or her nipples.

Then the advice of the doctors was simple: just as we need time to digest food, so we should give the child time between meals. Many children's lives have been saved by this advice. Next doctors studied the correct food to be given the child. Strict cleanliness, bathing and abolition of the use of linen before washing it, and leaving the child in peace were other reforms. Allowing the child to lie in an easy position free from swaddling cloths so that it could move freely was very hard to make mothers understand. Doctors also told them not to shake or to dangle the child. Of course, they said they saw peaceful, happy children, healthy and able to walk when the time came. The mothers were incredulous and said, 'But what shall I give the child when it cries?' Then, they saw that the child did not cry. Perhaps, in the same way, we give children things to eat intellectually when they are not hungry or are unable to digest them.

When we say that hygiene has increased the stature of the child, made him beautiful, increased weight in the child, we speak incorrectly. Science has only shown us that which the sacred book says, 'No one can add a cubit to his stature'.³ Neither hygiene nor science did this. Both gave liberty to the children for their bodies to grow; both broke the bonds and impediments of life to develop. It is life which gives growth and life has to be kept free to develop.

LOS ANGELES

We noted how the love with which the child was surrounded was not sufficient to give the child freedom to develop. Study was necessary because we humans are unconscious of many problems (which occur in the raising of children). Many may wonder when I say that the social question is a grave one. The child is in such an inferior social condition to ours that we are barbarians (in relation to children). Consider the acquisition of civilization which we consider almost sacred or holy. Take individual liberty, that part of liberty consisting in protection of personal integrity in relation to the power to protect civil life. We, in regard to these two points, have so surpassed the Middle Ages that we look upon the people of the Middle Ages as barbarians. An example would be our view of pirates who lived by what they stole from peaceful navigators and then grew rich upon the spoils.

Today, we cannot even imagine one person taking the property of another. Indeed, if such a person is known, the law allows such persons to be imprisoned or hidden away for the protection of civil society as well as the criminal. Yet, the law which consecrates these rights and the public sentiment in favor of these rights does not exist for the children in our society. In some nations, for example, the use of the wet-nurse is not considered wrong and her wet-nursing is quite a common and unhidden thing, admitted and accepted by society. Also, in certain well-civilized countries, the use of the wet-nurse is a luxury and the wet-nurse has the position of a servant within the family. There are other countries where nursing by the mother is customary. The countries where child hygiene is advanced accept such nursing by the mother. Indeed, the science of hygiene has proven that nursing by the mother is more favorable to the health of the child than the milk of another woman. Mothers nurture children except where impossible in Anglo-Saxon countries. It seems perfectly natural to us that a child who cannot have one mother must have another to nurse him.

But, if I say, 'I am so poor that I have nothing to eat and shall die' and I steal the capital of another, then this person would die instead of me. Yet this is the same kind of reasoning in the case of the wet-nursed baby. Of the lady one may say, 'Oh, well we do not know how she acquired the child. She may

CALIFORNIA LECTURES

have as much right to the child as another'. Yet, there is no doubt of the child's rights. He created his property, the maternal milk, by the act of being born and he has no other property to nourish him. Without the mother's milk his health is not good.

So, the child of a wet-nurse, robbed by barbarous piracy is born into conditions of poverty. The mother of the child cannot secure the hygienic aids which the rich mother can secure. Many times taking the milk takes the life of the poor child. This fact exists, namely, the child nursed artificially in the poor way of a poor person dies or is weakened and is not able to do the work to enable him to live as he should. The mother of the child is the sole administrator of the life of the child. She is able to sell his only property and no one intervenes. The proprietor, in this case the child, not only does not give his consent, but protests to such an extent that the protest is his death. This difference exists today: rich mothers in less civilized countries dress the wet-nurse in the most conspicuous and gaudy clothes; in more civilized countries, her existence is disguised as much as possible. No country exists where a person will refuse to shake hands with a person who takes the life of another child that hers may live. Nor do we look disapprovingly on the mother who has sold the property of her child!⁴

This is the measure of the difference in the civil world in which we live and in which the child must live. We say, 'What shall we do, let the beautiful child of rich women die of hunger?' One can find civilized ways to save the life of the child, but never by taking the life of another child. African sovereigns exist, suffering from some skin diseases who think it necessary to bathe in the warm blood of babies and think that they must do it. It seems impossible to believe that a sovereign would save his life by taking the lives of children. Yet, it does not seem impossible that a child should live at the expense of another child's life.

Let us consider the rich mother who is ill and cannot nurse her child. Her first problem is how to make the child become good, how to develop the sentiment of love for another, how to develop the sentiment of justice. Mothers consult educators, read educational books with the desire of solving the problem. The idea never enters the mother's head that she has given the

LOS ANGELES

milk that belongs to another to her child and that he owes his life to the life of another child. Her child starts life with a fundamental injustice behind him.

The mother is occupied with teaching the child the way to treat other children gently. The child is never told of the injustice behind his life and made to feel what a just man feels when he has committed a great injustice. The only way to put that child in the paths of justice is to tell him of the great injustice done by him. Otherwise his training in justice becomes involved in a network of hypocrisy of which he is unconscious. Partly because of unconsciousness of the fact, the child's heart becomes divided. As an illustration, take (the parable of) 'just and the unjust'. Thus, there must remain in the child from the father and mother a part where injustice is enclosed and which the child does not recognize. Then we are a generation of hypocrites and cannot make anything but a generation of hypocrites. This is the moral question (confronting us) when put with sincerity.

We say that we want to make the child just (but) we mean just to the strong⁵ and unjust to the weak. This double standard⁶ is buried and we are not conscious of it. This question of moral education is a principal question which touches us. If finally, (as a result of the reasoning above in relation to wet-nursing another woman's birth-child), we consider ourselves criminals and thieves, how can we bring up a moral man? Are we not in the same era as when the child was not kept hygienically clean and, therefore, infant mortality was high? The doctor said not only the child, but clothing and surroundings were to be kept clean. We may say the same thing now! The child must be kept morally clean and surrounded by moral cleanliness. When the doctor said infant mortality was due to dirt which brought infection, he said not only the child but the child's surroundings must be kept clean in order for the child to be infection free.

Yet, a social institution presenting us with a graver social problem than that of the wet-nurse is the foundlings' hospital. How many princes have used the foundlings' hospital as the trap-door method of hiding their crime? We might believe that the men, who in the Middle Ages had been hidden away, themselves had committed crimes, but the babies hidden in asylums

CALIFORNIA LECTURES

are the personification of innocence. Only the greatest criminals lose their names, but these children never knew their names. Often the prisoner has the memory of his mother to console him, but these unfortunates have never known their mothers. It is usual for children to say, 'If I am good, it will make mother happy', but these children can only say, 'If I even appear, I will disgrace my parents'. They are condemned for life by society, like those forgotten men who remained in prison until death, only so that a higher or more important person shall be peaceful and unrestricted. It is not even for some great harm, but to save that person from annoyance, only to save his moral name.

How many mothers find themselves in this situation. To have a son loved by her husband and this child has brothers whom he does not know. These mothers perhaps have done something exceptional to overcome this, but they will be occupied with the moral training of that child. She may forgive her husband and think there is something great in her. The father may occupy himself with the moral education of the child and the wife cooperate to make the child a moral man. She will never say to him, 'You have brothers among the most unfortunate and the most innocent in this world', because in so doing she would harm his moral education. We are, without a doubt, half civilized and half barbarian. We have two hands: one is twisted and deformed and the other is straight. We wish to work with the twisted arm and it is not possible.

What greater hypocrisy than for us to study moral aspects of this and that method of educating children unless we are willing to cast one glance at this great social question. It is the greatest hypocrisy to think of refinements, finer rhythms, language work, and other educational matters without recognizing that great fundamental wrong which is hidden. If in argument we seek to use the words of Christ, 'Today we have the elevated method for educating children in whitened sepulchers', this does not mean that we must not educate children.⁷ All the progress we make awakens us to be more able to see the wrong which exists in society. To wish to elevate oneself without uncovering the wrong is in vain and is not civilized. Every moral question must begin not with white and ethereal sublimity, but with the wrongs from which one must depart and

LOS ANGELES

these beginnings must go hand in hand to eliminate the wrong in order to become sublime.

St. Paul says, 'Without charity all else is vain, but with charity, when love exists all else becomes great'.⁸ So many works of civilization may become vain because the injustice existing in man constantly wars with justice. The greatest works of man will fall if hidden injustice exists in man, an injustice which allows him to be unjust to others. So, when we wish to decide how best to bring about moral education, we need not occupy ourselves with how to develop the right side, but be careful that the left side does not exist. Then, nothing will be easier than moral education. Teachers must know that it is not sufficient to tell moral stories, but they must change themselves to become just. Social change is necessary. When these wrongs exist, it is impossible to effect social change because we can only be hypocrites.

1. Adelia Pyle's text of the lecture reads 'technic'; however, I have changed the word to 'technique'.

2. Elsewhere, Montessori points out that mothers used to bind babies in swaddling cloths so that their bodies and limbs would grow straight. Yet, as she points out, inhibition of physical freedom resulted in irregular growth of the babies, including, inadequate blood circulation, weak muscle development and crippling of the child's limbs. Her medical observations and recommendations were radically different from local practices in the later nineteenth century.

3. Montessori references *Matthew*, 6:27. Here we find another example of Montessori noting that science merely verifies what the sacred scripture, specifically the *New Testament* previously stated. Indeed, here, as elsewhere, Montessori observes that scripture corroborates the truths of nature, for her, the object of science.

4. This Montessori lecture typed by Adelia Pyle includes the statement 'summary' after the heading, 'Dr. Montessori's Lectures of May 27th and June 9th'. Thus, the editor assumes this set of some five (5) single-typed pages is Adelia Pyle's summation of these two distinct lectures. No present way exists to verify the accuracy of this 'summary' nor to challenge the content of the summary. However, this comparison of the wet-nurse with the pirate in respect to the natural mother withholding the birth-child's milk as a property right from the child seems to contain a logical problem. Montessori clearly asserts the right of the child to his mother's breast milk and also clearly states her disapproval of society's lack of concern for the right of the newborn to his or her own milk when that same society would condemn piracy. Yet, these two sentences seem contradictory to her concern if we accept the presence of the negative as accurate. The sense of the context would seem to require the following: 'There is no country where a person will shake hands with a person who takes the life of another

CALIFORNIA LECTURES

child that hers may live; nor do we look disapprovingly on the mother who sold the property of her child'. Unless, Montessori is underscoring the non-existence of any child rights whatsoever.

5. This phrase is so underlined in Adelia Pyle's typed lecture notes for these two dates.

6. The typed word is 'conscience'; however, editorially, I inserted 'standard' since such is accurate and faithful to the meaning within the context.

7. The reference to which Montessori seems to refer here is Christ's following statement:

Alas for you, scribes and Pharisees, you hypocrites! You who clean the outside of the cup and dish and leave the inside full of extortion and intemperance. Blind Pharisee! Clean the inside of the cup and dish first so that the outside may become clean as well. Alas for you, scribes and Pharisees, you hypocrites! You who are like whitewashed tombs that look handsome on the outside, but inside are full of dead men's bones and every kind of corruption. In the same way you appear to people from the outside like good honest men, but inside you are full of hypocrisy and lawlessness. (*Matthew, 23: 25-28*)

If this is the case, then the thrust of her comment would be that education must aim at the inner child, so those who involve themselves in education must be learners prior to and on condition of them being teachers; otherwise, they are but 'whitened sepulchers', or, whitewashed hypocrites.

8. Presumably Montessori refers to the statement comparing love, in the Greek, *χαριτας*, with any other talent or skill a person may possess, *1 Corinthians, 13*:

If I have all the eloquence of men or of angels, but speak without love, I am simply a gong booming or a cymbal clashing. If I have the gift of prophecy, understanding all the mysteries there are and knowing everything, and if I have faith in all its fullness to move mountains, but am without love, then I am nothing at all ... In short, there are three things that last: faith, hope and love; and the greatest of these is love.

LOS ANGELES

The rights of children to develop physically, intellectually and morally

Lecture 5: 10 June 1915

One might say that we are in the same epoch concerning the social rights of the child as under Roman law since Roman laws have been adapted to the times, such as paternal rights. Although paternal rights have changed, the principle remains the same for us as it did for the Romans. The Roman principle is: the child has received the gift of life, should be thankful and submit to us. This concept that the child should be a grateful subject has never been changed or differentiated from the fact that the child comes into the world as a man who has the right to life.

This second principle, that the child comes into the world as a man who has rights is the concept about which we are beginning to be conscious, but our laws and customs do not recognize it. We said the other day that the child was not recognized as the patron of his legitimate nourishment, that is, his right to nurse at his mother's breasts. We still consider the child as a being who owes all devotion and possibilities of his life to us (adults). We express our affection to children by trying to have them imitate us quickly and even resort to violence to make them like us. When the child cannot imitate us as quickly as we would wish, we feel a form of impatience and many times blame the child harshly. But, this is the same with all subjected people: the one who subjects considers himself superior and his idea of the greatest good is to make the subject as nearly like him as possible.

It is true that a child in a certain way is inferior to the adult and to perfect himself he has to become an adult. However, we should look at this criterion both from the point of view of liberty as well as from the point of view of slavery. Instead of considering the child as a being who owes everything to adults, consider him as free, with his own rights. To clarify the concept, we need to look in detail at the social world which we allow the child.

Let us think back ten years amongst people who are not the most highly civilized, the world in which we raise our children.

CALIFORNIA LECTURES

As children, we found nothing prepared for the convenience of us as children in the material world. No smaller beings existed who were also men with the same way of living as we. We looked for small chairs, tables, sofas, brushes, dishes and other things. But we found nothing for a child. Contrast this with the luxury of things which are available for a doll. The children before now must have thought: 'There are only two fortunate classes of society, adults and dolls. We, alone, are not provided for'.

Yet one sees children troubled independently of the possessions of adults and dolls. We know that the child would like to live as the adult; we know that the child tries to imitate the adult and is apt to destroy the dolls' possessions. The child has such a desire to live the life of the adult that he has adapted to the use of objects not made for children but objects made for adults. In order for a child to sit upon a chair, the child must climb up using hands and feet, then (get down the same way and) work very hard to move that chair. Let us see ourselves in the child's place; consider ourselves as we are, with human needs, then add to this the needs of the intelligence which the child has. We are not to imagine ourselves as we imagine the child, as being apart from and different from ourselves. We are inclined to think of the people we subject as a different race!

Let us imagine ourselves among a race of giants who differ from us in proportion as we differ from the child and we ourselves are forced to use the giant's furniture, dishes and possessions. If we want to sit down, we have to climb on to a chair with our hands and feet. If we want to move the chair, we have to climb down the same way and move this great weight. We want to wash our hands but the wash-basin is like a big bathtub. When we want to empty the basin, it is too big and too heavy to empty it. It takes two hands to use a hairbrush. Everything is so high that we cannot use anything (without asking for help), doors to open, hooks on which to hang our clothes and other things. We are unable to do things we need to do and we feel the humiliation resulting from our failure to act. We certainly would disdain these giant people and not wish to live with them, if we knew they had prepared nothing so we might act.

I have found in the *Casa dei Bambini* that it suffices to prepare the environment, adapting to the size of the child, to open

LOS ANGELES

the child up to a new social life. Joy and enthusiasm, as well as awakened intelligence result and the children show that providing them with such an environment is a need which must be satisfied. To make believe (as when playing with dolls) is not the same as to do the act; doing actions gives the child a reason for life. I once visited a kindergarten where the head people, serious and educated people, told me that the children did the exercises of practical life, setting tables, eating, cleaning up, and so forth. I watched them and they set the table for dolls, with doll utensils.

If in that land of giants, we were given dolls and their outfits, although we had nothing for ourselves, we would say, 'This is an irony; we are men and want to do things for ourselves'. This situation lessens our liberty: if we had to have everything done for us, if our faces were washed, clothes buttoned, hair brushed for us! The child has a far greater desire to do these acts than we have because we have only an external interest in doing them, but the child does not do them only for the doing of them but also to develop himself!

The child must develop everything in life, coordination of his eyes, hands and feet, sensorial activities, coordinating his seeing, hearing and feeling, psychic acts, all these things which exist only potentially for the child until he actualizes them. In accomplishing these acts, the child is entirely different from us. The child has not mastered coordination and is slower than we are. We have not the patience to wait for the child to do in a long time what we can do in a short time. To us it is a waste of time, but to the child it is reflective learning. We see the object of our action to be accomplished, the external accomplishment of washing, of walking, of picking something up. But we forget that the development of these actions, washing the hands, walking across the room, picking up a glass of water, comes through doing them, not having them done for us.

Think of our pleasure in accomplishing tasks in a space of time suited to us. We speak of doing our tasks in peace. We speak of going out and having a hour in which to dress and sigh with relief when we are finished dressing within that time. We go to the table and rejoice in eating slowly and comfortably. We like our own homes because we can use our time as we need to. What if we went with great rapidity. Instead of

CALIFORNIA LECTURES

doing tasks in peace, the giants made us eat too fast, dress too fast? We would be in a constant state of rebellion. What if we were unable to explain our rights, explain our desire and ability to do things? We would be filled with anger. Then, if we could not explain, we would strike out, throw ourselves on the ground, as the deaf and dumb children do. Then the giants would say: 'What an ingrate; the more we do for them, the more disagreeable, capricious and unwilling to follow us they become!' 'They are bad by nature', the giants would say.

Teachers wished to know how to eradicate these disagreeable qualities born into the child! We heard mothers say, 'How can I correct the caprice? My child becomes all the more capricious'. But I see here the clumsy against the slave, adults against children. The one in subjection rebels. But the child who rebels is not like the angry man who rebels. The child rebels because he feels the need of developing the activities of life. The child's mission is to make a man and he tries to liberate himself so that he can fulfill his mission. The child's rebellion is different from an adult's rebellion because the child never feels hatred. Let us look at the fights between mothers and children who are not well educated. The mother does everything for the child and thinks she is doing the child a kindness. He answers in violence. The child must feel a great injustice, first being prevented from doing life's activities, then is treated with violence when he rebels, but he still embraces his mother. The greater the battle, the greater grows the love and the caprice. Both are instincts. Defending his rights to do life's activities, although angry and capricious, the child does not have hatred toward her. The child would say, 'I allow you to live, but why do you not allow me to live and to do what you do all day in front of me?'

The needs of the child's development includes intellectual development so the child tries to exercise his senses. But, as no one has prepared material for him to use in this sense development, he is like a hungry man who gets into a house where nothing is prepared for him. The hungry man finds and begins to eat something when the person of the house says, 'Leave that alone'. The child feels the need to help his eye which is not yet able to adapt itself to distinguish distance from form, form from color, as well as other things. So, the child tries to help

LOS ANGELES

his eye by the sense of touch. He wants to develop his sense of touch by touching everything. Here begins his moral education. He is trained not to touch and the desire to touch is called a fault of children. The mother slaps the child and says, 'Teach me a way to teach children not to touch things'. But this activity of the child cannot be prevented.

Existing in children is a constancy which makes them incorrigible in insisting on continuing to do things and in disobeying. Modern science has proven that in certain criminals who repeat the same crime in spite of penalties some force exists which impells them toward the act. When the child repeats the acts over and over in spite of punishment and criticism we are led to believe that a hidden impulse exists in children which pushes the child to act and that impulse is not harmful but useful. We can see the battle which begins between the child and the adult. The child wants to live in his own way and the adult suffocates this attempt to live.

It is true that the rights and instincts belonging to the child and to us adults differ in the form of their expression. An example is the fact that a child needs a long time in which to do things. When the child does not do as we do, we would have him stay outside of society until he has reached the same stage in doing the act as we adults have. It is as if the adult gave an order, 'Become as I', and then prevented the child from acting or growing. The child will become more like a man as he has a chance to act, grow and live and is given objects adapted to his use.

We put the great part of moral education in mistaken social relations between the adult and the child. We are the producers of children's reactions and then we try to solve the problem of those reactions. Our reasoning is simple: 'To make the child good, he must become like me, the adult, imitate me, obey me'. We put obedience above all else and say, 'When I have made him obedient, all else will be easy'. We can compare our subjecting the child to the father when he left for work in the morning and said, 'See how tall I am and how broad, and so forth,' then commanded the child to have grown physically to be like the father by the evening when the father returns home! This makes us laugh because it takes a long time to grow and the same is true of the time it takes for the inner

CALIFORNIA LECTURES

growth of the child. The solution lies in giving the child every possibility of growing in the best way possible. Man is neither a horse nor a cow, but in growing he will become a man. To make him an adult, we do not stretch his legs, but give him food, let him walk and let him grow. The same is true of the child's inner growth. We must prepare an environment fitted to the child's needs, recognizing rights adapted to his needs, for the social man to grow.

So, the first step in achieving moral education for the child is to prepare a social environment suited to the child's rights and needs. Men's rights are sacred and we should continue to give the child the rights to grow and to live. We must bring to birth civil laws and customs for the child which are not the same both for adults and children. To do this, it is sufficient to place ourselves in the position of the child. If someone were to pat me on the head and say, 'Oh, how pretty', I would say, 'Who speaks to me in this way?' No one has scruples about interrupting a child and, yet, a child is doing an inner work by which he is creating himself. It is as though I were a poet writing a poem and someone interrupted me to say, 'Come and have tea'. I would say, 'How dare you interrupt me. Now, my inspiration is gone.' Thus is the good growing in the man lost when the child is interrupted. The same respect accorded to the adult and to the poet should be shown to a child. We used to smile at the thought of slaves being called people. But it is slavery which prevents the child from becoming a man.

We must prepare a social life for the child not permitted by the present customs. It is not the philosophical but the social principle of liberty from which springs the life of man. This social principle of liberty for the child is a question which should be looked at seriously and gravely as are all questions which affect humanity. We should study this question as profoundly as sociologists study the adult social principle of liberty. Since a child cannot express his needs as adults can, science must study the child and find out his needs. Since the child cannot ask for his rights, we must give them to children. Giving the child liberty is not the same as giving the slaves freedom. Giving slaves freedom is an act of law, but giving the children liberty involves giving the child the complex liberty of life. A long study is necessary so that this help for children may become a science.

LOS ANGELES

Liberty and pedagogy go together, but always begin from the common basis of social liberty. All say it is necessary to develop the social life, but only in a superficial way, yet study shows that children are kept outside real living. It is incredible and almost pains me to repeat that criticism which has been made about my method, that is, that the social side of the children has not been developed because all the children do not sing together, nor hold hands and dance together. My critics say that I do not develop the social side of the child. But the social sentiment does not develop when all children sing or all dance at the same time. When we speak of developing the social side of the children, we speak of elevating and completing human life and this is very different from feeling the experience of chorus girls singing and dancing together. If the social life of the child depended upon all holding on to the same ribbon at the same time, no one would be happier than the prison chain gang. We know that social life is something very high, complex and difficult of attainment, but it is attained only through the liberty which permits the child to perfect itself.

San Diego lectures (and a lesson)

The organization of the work materials and the spontaneous production of the child's mind¹

Lecture 1: 14 July 1915

One might say that pedagogically the work of the school is to organize the work of the child. Were the child's work not organized rationally according to the child's needs, school would not exist. Neither instruction of the child nor spontaneous culture of the child's mind would be possible. The organizing of the child's work and offering this work to the child is a very exact work for us. Yet, in fact, it is necessary to organize the work of all children whatever their ages.

But the organization of the child's work according to the child's needs is only one side of the problem. The other side of the problem has fundamental importance and that is to leave the child free to work, obeying not the laws of the teachers but the laws of his own inner life. When we say that the child's work should be allowed to develop in peace, we mean that the child should be allowed to develop freely, in liberty. Two reasons exist for this approach: first, as we have seen, the child develops himself. Secondly, because of that self-development, the child reveals to us the laws motivating his work, that is, the psychological laws of his life. So, we must develop both a science and an art to respect the liberty of the child.

Now, once the child's mind has organized itself, it takes a form. Taking a form, the child's mind orders itself because form always brings order. From that organization and that

SAN DIEGO

order, the inner life of the child springs up; from both organization and order springs up the child's power of spontaneous production. But, we cannot possibly foresee that which life produces of itself so we always approach the child with an attitude of suspense, of waiting. Indeed, our attitude must, above all else, be one of waiting.

A lady once gave me a very good motto for this method: wait observing. Nor do we practice a dry and barren observing, but, while we wait, we observe, always in expectation. This is also the poetic description which is given of the Mother of Christ, namely, she waited and watched the child, waiting for the revelation to come.² This is really the poetic attitude of one who observes life unfolding. We also do this with the physical life of the child because the child gives revelations of growth in his physical life to those who observe. All manifestations of life must have this characteristic. Above all, manifestations of life which are least attached to the material life, that is, the productions of the child's inner life and intelligence have this characteristic. This is the reason we can say that the old methods of educating children are outside the child's life because they presume a precise line along which the child's intelligence must develop. These old methods which give themselves a precise line according to which the child's intelligence must develop are apart from the child's inner life, because when one is in life the attitude must be one of waiting for manifestations and revelations. But if we do not leave the children free to reveal themselves, we will not have these manifestations and revelations.

While it is true that we must leave the children free to reveal themselves, it is also very true that we must organize the work or we cannot obtain these revelations. Now, one cannot expect such organization of work from a regular teacher. She will not organize the work because such organization itself is a long work and a superior kind of work. Such a superior kind of work cannot be done right on the spot, but should have been done beforehand. A scientific preparation should precede, beyond what this teacher herself can do. The didactic materials, for instance, established through experimentation established by experience is given complete to the teacher. Of course, the teacher must be conscious of the organization of the work and must know it. But, beyond the teacher knowing the organization

CALIFORNIA LECTURES

of the work, above all the teacher must respect the liberty of the child. This is the teacher's real mission.

This respect of the liberty of the child consists above all in not interrupting the work of the child. Thus, the activity of the teacher becomes almost negative. This negative activity of the teacher parallels the negative governing activity of those who have a great ability for the governing of an organization or of a state.³ He who governs a state does not intervene in the activity of the citizen's mind, for he would become a tyrant. After all, the ability of the one who directs others is in his finding the means of liberating the activities of those whom he directs. When the teacher does this, it is then that the child's inner powers of production increase and grow in the school. If we look at ourselves in this regard, our ability to find the means of producing with our inner life depends upon being able to find means to do so adapted in our environment, and then we must be free to use these means. So, upon these two principles, one can form a real technique for education and, perhaps, even for the science of education.

We have seen that the production of intelligence does not require the accumulation of great stores of culture, especially since the accumulation of culture might also imply the accumulation of errors and the deadening of intelligence. Of course, I do not exclude culture by any means, but this possibility of quiet, spontaneous, ordered development in work, without disturbance and in quiet should be the foundation of culture. When this liberty is given, even the little child follows a special path, the path of concentration of thought and constancy in work. Concentration of the attention and constancy in work seem to be like an inner voice which is developing.

We must consider that even in the universe we have this central force holding all things together. Minerals are what they are on account of the molecular force which binds them together. So also the living form is determined because of the attraction of the material to the precise form. All this occurs with such precision that we know all things are of certain sizes, that man and all other living things have fixed within their primitive cells the limits and qualities of their possible development.⁴ All this is due to the law of molecular attraction around a center. Everything which exists, in order to exist, must have that attraction to a

SAN DIEGO

center. Thus, when the child's mind is allowed to organize itself spontaneously and to develop spontaneously, the child's mind concentrates. One might say that the secret of and the way of caring for the child's inner life, as it were the hygiene of the child's inner life, lies in that concentration which means existence itself for the child. Yet, together with that concentration, we must consider order. All living things possess order. Within our human bodies, for instance, our organs are separate, ordered within themselves. So, to help the organization of the child's intelligence is to help the development of all these things within the child. But it is the organization of the work which gives direct influence on this order and on the establishment of mental order. That, however, which leads directly to the concentration is the free activity of the child for self-development.

Therefore, when we say that we are not educating but simply helping the child to live, we are saying something with a truthful basis. But, when we have said this, we cannot do anything more. This statement seems repugnant to what we have been accustomed to believing. But the child, like the geniuses who all of a sudden stop before some small object, already possess the ability to do so; we cannot give that possibility to the child or to the genius. How can we make a person suddenly become sensitive to a new discovery and ready to use it? We cannot do more than to give the hygiene of it to the intelligence; then the intelligence will recognize it. Indeed, you would see this occur, if the progress of education went in this way and the child's progress would be much more rapid than it is now.

Many who criticize my method have said that children left free, without help, to exercise themselves with these exact objects we give them, would not produce anything. We answer this criticism in a practical way, by showing them the children who do produce. Of course, we could also answer theoretically. Rhetorically, we could pose the question, 'And what do you produce with your children?' The educational community has a prejudice. They think that if the child's mind is left free in this way it becomes barren and dry so the child must be nourished externally.

Perhaps you have not heard the matter expressed in this way, but thousands of times we hear: 'It is necessary to develop the child's imagination'. Our method goes beyond the perception of material things exactly with the imagination. Those

CALIFORNIA LECTURES

people who ask that question think that the child's mind will stop when we give the children real and positive materials and the children will not go beyond these materials to something more elevated.

This other different way of educating children (I will not call it antique because it is the educational method of the day, but it is not my method) says: 'We must do this; we must make the child's imagination entirely'. Then, if they begin by leading the child to take the first step, they will have to keep on leading. But this is an entirely different direction for education in which we say: 'Let the children live and live freely and then all will come of itself'. It is they who say that the child will stay with the positive facts; it is they who make the child stay at the positive facts; it is they who prevent the child from flying higher and going beyond these positive facts. Certainly, we all observe that the highest things are those which come from something higher than we can reach from standing over positive things. This is true; it exists this way. But I believe that it is not we who create these higher things. Both teachers and mothers who have the care of children think it is they who produced the superior progress of mind which they see children make, merely because it was they who cared for the children before they saw them make progress and development. But this is like the Chanticleer who reasons that it is because he sings in the morning that the sun rises.

But we have much more power over the child learning than the rooster over the sun rising. Yet we do not ask ourselves if, perhaps, we have done something to retard the inner development, even to lessen it rather than develop it. This is a question we must face. Have we helped the child to develop, or have we impeded the child's development, or even diminished it? Which have we done? It is certain that even if we hinder the child, such a power of self-development exists in the child that he still develops pretty well. Yet, still, we must ask ourselves: have we helped or hindered the child's self-development? This is the question and the problem.

Now, let us return to the child's physical development. The fact of constant progress in our history shows that, if men have been able to do more than their fathers have been able to do, men do not do only that which has been taught them. So, if

SAN DIEGO

Future generations will be able to understand more than we understand, it is not we who have given them the capacity to understand. If great progress is made by discovery, this means exactly that there is a capacity in men to discover and no human can give them that capacity. It means that a great power exists, acting by itself on which we form all our hopes. We always speak of future generations and the great progress which is to come, but certainly, if we produced that future progress, it would never go beyond the point which we have attained today.

But is not the real theory of education within this concept? Better still, there is a practice of education in this concept because there has always been this theory! People say: 'The child is the flower which is growing and the youth is the hope of the coming generation'. This theory of the concept of progress has always existed among people. The hope of youth has always meant progress, that this power of progress exists within youth. Neither was or is there any sentiment against this theory. But those (who favor the other way of educating children) keep saying: 'We must develop the heart, the imagination, the intelligence of the children and youth'. This contradicts the theory! But, now it is necessary for us to practice this accepted principle.

A great distance and difference exist between applying this principle and making a theory out of it. We must tear out our hearts, cleanse them of prejudices and begin again so that the theory and the practice are one and the same. But there must be faith that the theory is really true in order to apply it, to put it into practice. We must believe that all beings develop by themselves, of themselves and that we cannot do better than not to interrupt that development. We must confess to ourselves that the psychic life of man is full of mysteries and this is the reason man is full of surprises for us. The preparation for the teacher is twofold: to be sensitive to the mystery and to be sensitive to the wonder of life revealing itself. This is a sensitiveness which the habit of seeing miracles often makes us lose so we no longer feel the mystery.

I will tell you an anecdote which will make clear to you my position and my attitude in connection with mysteries. An

CALIFORNIA LECTURES

uncle of mine was very much interested in my studies, especially when I was studying medicine. When he heard the history of the evolution of man from one small cell, one thousandth part of a millimeter, out of which the present-day complex man developed, with all his specialized organs and potentialities, with all this wonder, having the power of feeling, reasoning and loving, existing today when yesterday man was nothing, he said: 'Yes, these things are wonderful, but I must not think about them too much because I feel as though I should go crazy, as though I were losing my mind'. Another time, I heard another man observe: 'It is very simple for a child to be born – simply a man and a woman marry'. One felt the mystery; the other did not. Again, something once occurred in one of the children's schools. Little children were in one room; elementary children were in another room. I had left a globe of the world in the room with the little children. A little child came in, gave one look at the globe and began to dust the room. Then a little girl came in and, standing still before the globe, said over and over again: 'What is it? What is it?', staring at it all the while. The first little girl became impatient and said: 'Why, it is a big balloon'.

Thus, it is necessary to cultivate this sensibility to wonder in order to attain to more perfect observation. This is necessary both for parents and teachers. The teacher, the father, the mother, and all who have contact with the child's life should be ready to feel this mystery and wonder. The sensibility is natural, but the inner refinement is necessary or else one passes by roughly and says 'It is a big balloon', or else 'I did it'. The roughness and crudeness, the inferiority of this is something from which we must lift ourselves in order to understand the life which is growing unseen within. It is an attitude without which a very great and profound confusion of ideas might arise. A moral fight also occurs against the instinct which makes us fall asleep upon the easiest, crudest, roughest way of looking at things. Such a sleep no longer permits us to distinguish between that which has grown of itself and of its own accord and that which others have made and that which we ourselves have made. We need education to lift us out of this passive force which gives us this low confusion of things. To think that we have done something is very easy; to think that we have

SAN DIEGO

accomplished something in reality accomplished by others is easy. We do not have a bad intention, but our ideas are just confused. So our closeness to something prompts us to say that we have caused something to grow when it has grown of itself.

The fundamental religious teaching reminding us that all things are the gifts of God has educational importance for giving us clearness of ideas.⁵ In the first place, this religious teaching makes a first distinction and removes confusion because this distinction provides insight into the real formation of every moment of life. We can now do something similar to this distinction in another field, that is, in the understanding of child intelligence both in recognizing the phenomenon and in understanding what is happening there without our being able to see it. This is the attitude and formation of mind which the teacher, father, mother and all humans should have.

The principle of distinguishing between and among things is the first principle of intelligence. To distinguish that this thing is simple and that other thing is wonderful is in itself a sign of intelligence. To recognize and realize that this thing grows of itself naturally and that this other thing is made by us is a sign of the great art of the intelligence. This distinction itself is fundamental and forms a grade of order in the mind of the teacher, namely, the possibility of recognizing natural phenomena and the teacher's duty toward such natural phenomena.

If, for example, we have come to the conclusion that we have had little to do for the life which grows of itself, if we become convinced of this and realize it profoundly, we do not need to say, therefore, that we must become humble. We need to say only that we understand things more clearly and then we are more intelligent than we were before. So, when people say that I wish to lower the teacher in status, that is untrue; I really wish to illuminate her role. To find our correct place is a long road, but if and when we find it, we find that it is smaller than we thought it would be. We are, as it were, waking from a sleep in finding that place where we are. If I, for instance, had fallen asleep to dream that I could create human intelligence and imagination and give them to children, but all the time remained in bed and asleep, then suddenly awakened and saw that I was unable to do these things, then as awake I would be superior to myself as asleep. Awake, I find that I can do little

CALIFORNIA LECTURES

for children, but it is better than if I were still asleep. So, in waking, I am perhaps beginning to do real work, if only a little. That humility is the beginning of work, of accomplishing something, has always been the fundamental principle of the spiritual life. This humility, however, is not humiliation, but it is an elevation and the basic principle of producing anything.

Now, let us pass from the path of the spiritual to the path of the intellectual – although different paths, they travel the same road. The first step on the real road, the road to reality, is humility, not sleeping and dreaming. I have made this long preamble about these basic principles to prepare my way and to provide the conclusion that natural spontaneity occasions the elevated productions of the child's mind. I do this to fight the principle that it is we adults as teachers who must cultivate imagination in children. I will speak at length on this next because it is very important.

Eugenia Andriano and Mrs. Elisa Harrison both stated that Montessori lectured in four California cities, San Francisco, Oakland, Los Angeles and San Diego. Indeed, the face page for the lectures wrapped in the red ribbon which Eugenia gave me in September 1969 has typed upon it: 'Lectures of Doctor MARIA MONTESSORI ... LOS ANGELES, SAN DIEGO, SAN FRANCISCO ... CALIFORNIA ... UNITED STATES OF AMERICA ... A.D. 1915 ... Copyright.' Three San Francisco newspapers, the *Examiner*, *Chronicle* and *Post-Call*, document both the San Francisco and Oakland lectures. As of this date, 1 January 1997, no newspapers in Los Angeles or in San Diego have been searched for notification, if any, of Montessori lectures delivered in those two cities, so the identification of the five specified to have occurred in Los Angeles and the two in San Diego are not verified at this time.

1. Unlike the prior lectures whose subject titles are the responsibility of the editor, this is the subject title which Adelia Pyle typed at the head of this 14 July 1915 lecture of Montessori, presumably given in San Diego, but both the city and location within that city are yet to be documented, as of 1 January 1997.
2. Montessori refers to one of two passages of Luke's Gospel. In one, Luke tells of Mary and Joseph presenting the baby Jesus in the temple at her time of purification, as required by the Mosaic law (*Leviticus*, 12:2-6) and Luke says: 'As the child's father and mother stood there wondering at the things that were being said about him ...' (*Luke*, 2:33-34). The second is the finding of Jesus talking to the doctors of the Law in Jerusalem during the feast of the Passover. Christ chided them for seeking Him and Luke states: 'He then went down with them and came to Nazareth and lived under their authority. His mother stored up all these things in her heart'. (*Luke*, 2:51-52)
3. The more one understands Montessori's view of the teacher in respect to the learning of the child, the more one thinks of the oriental view of learning, acting and governing as being possible only when the learner merely opens self

SAN DIEGO

40 The actor does not act and the governor does not govern. One specific example is Lao-tzu and his *Tao*. Tone poem #2 is a good example of this application of the twofold principles of *yin*, *lack of light, emptiness, non-action, the female* and the *yang, light, fullness, action, the male*.

When the people of the Earth all know beauty as beauty,
there arises (the recognition of) ugliness.

When the people of the earth all know good as good,
there arises (the recognition of) evil.

Therefore, Being and non-being interdepend in growth;

Difficult and easy interdepend in completion;

Long and short interdepend in contrast;

High and low interdepend in position;

Tones and voice interdepend in harmony;

Front and behind interdepend in company.

Therefore, the Sage: Manages affairs without action;

Preaches the doctrine without words;

All things take their rise, but he does not turn away from them;

He gives them life, but does not take possession of them;

He acts, but does not appropriate;

Accomplishes, but claims no credit.

It is because he lays claim to no credit

That the credit cannot be taken away from him.

Imagine the reaction of an American audience, indeed, American public educators to such 'in- or non-activity' on the part of the teacher! Given the perception of 'adult' to the American and the sacredness of 'teacher' to the American educational system, no wonder Montessori, an Italian woman medical doctor, who was also Catholic, without any 'professional' training in formal educational methods, alienated the so-called professional public educators!

4 A basic case in point, unknown to the medical doctor Maria Montessori at the time she spoke this, is the fact that each male sperm and each female ovum has twenty-three chromosomes. Upon fertilization, a single cell results and contains forty-six chromosomes, the same number of chromosomes each human being has. But, each new fetus's forty-six chromosomes are in a different organization from the organization of either of the parents, so each new fetus is unique. Each fetus, therefore, is not an organ of the mother's body, but a unique individual, producing specifically human proteins and enzymes from the inception of the cellular division. That unique fetus's organization of those forty-six chromosomes remains the same from the date of conception to the day of death. So, Montessori contends, each child and his or her development is unique to that child, each child having a specific organization, physical and intellectual growth pattern whose ability to develop requires a learning environment which permits freedom and contains organization of work, namely, materials like those she developed through experimentation with the children.

5 Again, we find the basic guide to Montessori's view of children and their education to be rooted in her Catholic faith, namely, that life itself and the child's life in particular is the gift of God and that our study of nature teaches us that we must serve as the nurturer of that life. So, following the teaching of Christ, 'suffer the little children to come to me, for of such is the kingdom of God' (Matthew, 18:5-10), Montessori dedicates her life to fostering the life of the child.

CALIFORNIA LECTURES

Education in relation to the imagination in the little child¹

Lecture 2: 19 July 1915

There is a common belief that the little child is characterized by a vivid imagination and, because of this, a particular education should be brought to bear upon him in order to cultivate such a special gift of nature. The child's mentality differs from ours because his goes beyond our vigorous but restricted limits and delights in wandering through the fascinating world of the unreal. We notice this same mentality among savages. This infantile characteristic also gave rise to the generation of a materialistic idea we no longer hold, namely, 'ontogenesis presumes phylogenesis', that is, the life of the individual reproduces the life of the species.² So, a man reproduces the life of a civilization. Therefore, little children have psychic characteristics which we find in savages. Thus, people assume that like the savage, the little child is fascinated by the fantastic, the supernatural and the unreal.

Rather than give utterance to similar flights of scientific fantasy, it is simpler to note that an organism which is still immature, like that of a child, may distinctly resemble mentalities less mature than our own, like that of savages. But, allowing those who interpret infantile mentality as the 'savage state' to keep their beliefs, the objection still can be raised that, in any case, this savage state is a passing state and one which has to be overcome. Thus, education MUST help THE CHILD to pass through this, but it should NOT DEVELOP THE SAVAGE STATE or hold the child back in it.³ True, all the forms of imperfect development which we find in the child bear some resemblance to like characteristics in the savage. An example is language, specifically the poverty of vocabulary, the existence of concrete expressions only and the generalization of words, as a result of which one word serves many uses and one word also indicates different objects. Also present is the lack of modes in verbs because of which children use the infinitive only.

No one, however, will say that 'for this reason' we should hold children artificially within the confines of such primitive language in order that the child may easily pass through this

SAN DIEGO

pre-historic period. Though some peoples remain permanently in a state of imagination in which the unreal prevails, our children belong to a people whose mentality finds its delight in great works of art, in the civilizing results of constructive science. Such products of a superior imagination represent the environment in which our children's intellect is destined to mold itself. It is natural that the child, in the nebulous period of mental development, should be attracted by fantastic ideas, but we must not forget, because of this, that he is our successor. Hence, the child is the one who must outstrip us and the least we can give the child for such a purpose is the maximum of everything at our disposal. A form of imagination which is held as 'peculiar' to infancy and almost universally recognized as creative imagination, is that spontaneous work of the infant mind by which children attribute desired characteristics to objects which they do not possess.

For example, who has not seen a child ride horse-back on his father's cane, twitching as though he were on a real horse. Behold a proof of imagination in the child! What pleasure children take in making a wonderful coach by putting chairs together. Then some stretch out joyously from the inside of the coach to look at an imaginary landscape or to greet an applauding crowd. Others arch themselves on the backs of the chair and whip the air as though they were driving fiery steeds! Lo! These are other proofs of children's imagination. But let us observe rich children. They possess docile ponies and habitually ride in a carriage or an automobile. They would look with a sense of disdain at the child running about, furiously whipping a cane on which he was riding! Rich children would be astonished to see children so happy under the delusion that they are being carried along by stationary chairs. They would say of such children, 'They are poor and do this because they have no horses or carriages'. So, an adult becomes resigned: children delude themselves!

But the child riding horse-back on his father's cane is not a proof of imagination, rather it is a proof of unsatisfied desire. It is not an activity allied with gifts of nature; rather, it is a manifestation of conscious noticeable poverty. No one certainly would maintain that it is necessary, in order to educate the rich child, to take away his horse and give him a cane. Neither

CALIFORNIA LECTURES

is it necessary to prevent the poor child from contenting himself with a cane. If a poor child, or a poor man or a beggar had only dry bread to eat; if the poor child were to seat himself beside the iron grating of a fine basement kitchen because he could smell the food he imagines that he is eating with his bread, who would prevent him? But no one will claim that it is necessary to deprive children of their meat and give them bread associated with savory odors in order to develop the activities of their imagination whether of the poor or of those more fortunate for whom the real means were destined.

A poor mother who loved her child very much gave him a piece of bread, divided into two parts, saying: 'This is bread' and 'This is meat'. The child was satisfied, but no mother would wish to under-nourish her child in order to develop his imagination in this way. Yet, I was asked in all seriousness if it would not have been harmful to give the use of a piano to a child who was constantly pretending to play the piano on a table. 'Why should it be harmful?', I asked. 'Because, in that case, the child would learn music, it is true, but he would no longer be exercising his imagination and I do not know which is more useful!'

None of Froebel's games are based on like beliefs. He gives the child a block and says 'This is a horse'. Then he arranges other blocks in a certain way and he says 'This is a stable'. He arranges the blocks in yet another way and he says, 'This is a tower', in another way and 'This is a village church', and so forth. The objects in these exercises lend themselves even less to the illusion than in the case of the cane used as a horse. There the child at least mounts, moves about and whips the 'horse'. But, to make towers and churches out of blocks which first were horses brings about the height of mental confusion. Furthermore, in this case, it is not the child who 'imagines spontaneously' and works with his own brain. No, the child must picture for himself what Froebel, or the teacher, tells him at that particular moment. Though the child is not quiet, though he really thinks that the stable has become a church, or though his attention may wander, certainly he would like to move about; but, the child cannot because he must watch that cinematograph which the teacher names in rapid succession. Yet this cinematograph is merely composed of pieces of wood, each like the other.

SAN DIEGO

What is nurtured in this way in such immature minds? What do we find of a similar nature in the life of adults which will show us the definite results of educating the children's minds after this fashion? Some men really do mistake a tree for a throne and, therefrom give kingly commands; indeed, some believe themselves to be God as a result of false perceptions. More serious forms of 'illusions' are the beginning of false reasoning for adults and are concomitant with delirium. The insane create nothing, but neither do those children who are condemned to the restrictions of an education which would unconsciously tend to develop childish manifestations into illusions, that is to say, to develop manifestations of immaturity in normal development.

We are apt to think that we develop the child's imagination very much by getting him to believe certain fantasies are true. For example, Christmas in Latin countries is personified by an ugly woman, the 'Befana' who can see through walls, comes down the chimney and brings toys to those children who have been very good and leaves charcoal for those children who have been naughty. Anglo-Roman countries, on the other hand, present Christmas as an old man, covered with snow, carrying an enormous bag filled with toys for the children, and who comes into their homes at night. But how is it possible for the child's imagination to be developed by that which is in truth the fruit of the adult's imagination? We alone imagine, not they; they merely believe. They do not imagine.

Credulity is indeed a characteristic of an immature mind which is lacking in experience within a consciousness of realities where there lacks an intellect which can distinguish the real from the unreal, the beautiful from the ugly, the possible from the impossible. Do we want perhaps to develop credulity in our children only because they show themselves credulous at that stage wherein they are naturally ignorant and immature? Certainly credulity may exist even in an adult, but then it is in opposition to an intellect and it is neither its basis nor its product. Credulity germinates in a state of intellectual darkness and we are glad to have superseded that stage. We cite credulity as a stigma of the lack of civilization.

An anecdote of the seventeenth century, for instance, shows such a lack of civilization. The 'Pont Neuf' in Paris was a

CALIFORNIA LECTURES

thoroughfare and the meeting place for idlers. Fakirs and quacks often mingled among the crowds. Once a fakir made his fortune by selling a Chinese salve which would enlarge the eyes, make the mouth smaller, lengthen a short nose or shorten a long one. Mr. De Sartun, chief of police, arrested this fakir and said to him, 'Mariolo, how do you attract such crowds and make so much money?' 'Sire', he replied, 'how many people do you suppose pass over the bridge daily?' The chief of police replied, 'Some ten to twelve thousand'. 'Well, sire', Mariolo said, 'how many out of that number would you consider intelligent people?' 'About one hundred', Mr. De Sartun responded. 'Too many', observed Mariolo, 'but I'll leave it at that and I have the remaining nine thousand nine hundred from whom I get my money'.

The difference between now and then is the fact that we have a greater number of intelligent people and fewer who are so credulous. Education, therefore, should not follow the path toward credulity, but rather that of intelligence. The experience and maturity of the mind causes credulity to disappear little by little and instruction is a help in this. Be it in peoples, or in individuals, the evolution of civilization and of the mind tends to lessen the state of credulity. Wisdom, it is frequently said, dissipates the error of ignorance. In the void which is ignorance, fantasy easily wanders about, just because it lacks that support which permits of greater attainments. So, the Pillars of Hercules disappeared when the Straits of Gibraltar became the passageway to the oceans. So too, the Redmen disappeared as the great American spirit of democracy gathered them into its civilizing environment. Columbus could no longer say that the sun obeyed his command when the sky darkened at his word since the eclipse is a phenomenon known to the Indian as well as to the white man.

Is it perchance this illusive imagination founded on credulity which we wish to develop in children? Surely not. Our wish is not that such a condition should continue. In fact, when the child no longer 'believes in the stories' we are delighted. Then we say 'he is no longer a child'. Such must be the course of events and we expect it. The day will come when he will no longer believe these stories. But, when the child reaches this state of maturity, we should ask ourselves 'what have we done to help? What support did we give to this feeble mind in order

SAN DIEGO

that it might strengthen itself?' The child overcame all the obstacles in spite of our impulse which kept him back in a state of illusion and ignorance. The child overcame himself and us too, reaching the goal whither his inner forces of development and maturity lead.

However, the child might say to us, 'How you have made me suffer! Our hardships in the effort to develop were already so great and yet you oppressed us'. Would this not be the same as if we were to treat the child's gums in such a way as to retard the growth of his teeth, just because one of the characteristics of a newborn baby is its lack of teeth? Would it not be like keeping the child's little body from growing because the characteristics of the preceding state were that the baby could not stand upright? In fact, we did act in this manner when we tried to have the child keep his baby talk, instead of helping him by letting him hear the sounds of words clearly articulated and showing the child the movement of our lips. Instead, we copied the child's rudimentary language, repeating the primitive sounds he emitted, saying 'da da', 'ma ma' and so forth, or else speaking in a low lisp or in other ways characteristic of the beginnings of an articulate language. So we detained him at length in the formative period, a period full of difficulties and of great effort on the part of the child, holding him back in the arduous state of infant language expression.

This is what we are doing today by our so-called education of the imagination. We amuse ourselves with the illusions, the ignorance, the errors of an immature mind, just as only a short time ago, we delighted in the laughter of the baby being tossed up and down. But we now see such a thing to be dangerous and to be condemned by child hygienists. In short, it is we who are amused at the child's credulity. But, in admitting this, we should recognize that we resemble somewhat that lady who was interested in a dispensary for poor children, but who kept saying 'If there were no more sick children, I would be most unhappy'. So it is with us, if children were no longer credulous, we should miss it greatly! But to artificially halt the child's stage of development and to amuse oneself thereby, is one of the unnoticed faults of our times — such occurred in the ancient courts, where authorities were wont to arrest the growth and development of some of the court's subjects in order to make

CALIFORNIA LECTURES

dwarf jesters for the king's amusement. This comparison may seem harsh, but it states a real fact. We are unconscious of doing this with young children, it is true, yet we speak of it constantly when we say, showing such disdain for the child's immature age, 'We are not children'. If we did not arrest the child's immaturity in order to contemplate this inferior state, then we would say of the child as Christ did, 'that he who would be perfect, should become as little children'⁴. We must give the child FREEDOM for his growth and admire the marvels of the child perfecting himself as he continues on the way of greater conquests.

THAT FAITH WHICH IS TRUE IS THE BASIS OF RELIGION⁵

I have often been told that the education of the imagination founded on this basis of fantasy, 'prepares the soul of the child for religious education' and that an education based on reality, such as mine, is too arid and dries up the spiritual springs. Such reasoning, however, cannot be shared by religious persons. They well know that religion and myth are at opposite poles so the myth must cease to be real as soon as the child's mind matures, whereas faith must accompany a human being until the end of his life. Religion is not the product of a fantastic imagination. Religion is the greatest reality, the only truth for the religious human being. Religion is the fount, the support of the human's life. The person who is not religious is certainly not one lacking in imagination, but rather a person lacking in inner poise. Such an irreligious person is less serene, less strong in misfortune than a religious person. Not only that, but the irreligious person vacillates more in his ideas. He is weaker, more unhappy and he clings to his imagination in vain in order to construct a world outside the bounds of reality. Something within him cries out with David, 'O Lord, my God, my soul thirsts after you'. Yet, if the irreligious person hopes that through his imagination alone he might attain the goal of his true life, he may feel his feet sinking into the quicksand in a moment of supreme struggle.

When an apostle seeks to call a soul to a religion where he may rest his faltering foot on a rock, he has recourse to the person's feelings not to the imagination, since he knows that he

SAN DIEGO

need create nothing, but only in a loud voice call the person to that which slumbers in the depths of the human heart. The apostle knows that he must arouse a life which has fallen into a stupor, similar to a human body buried beneath the snow, rather than merely imagine a snowman who is melted by the sun's rays! True, fantastic imagination has penetrated into religion but as an error. In the Middle Ages, for instance, plagues were very simply attributed to a direct action of divine punishment. Today, however, plagues are attributed to the direct action of microbes. Papin's steam engine caused people to think some diabolical agency dwelt within.⁶ These are the very kinds of prejudices which, like all fantasies, spring forth in the void of ignorance. But not all religion is constructed in this way, as a fantastic castle erected on the foundation of ignorance. If such were the case, we should find that savage peoples were religious and the civilized were irreligious. Quite the contrary, savages have a religion which is fantastic, fragile, based in great measure on the terror caused by the mysterious forces of nature. Civilized people, however, have a strong positive religion which grows ever purer, while the science of truth, in penetrating the veil over nature, only exalts and makes clear the mystery.

TRUTH IS THE BASIS OF EVERY GREAT ARTISTIC PRODUCTION OF THE IMAGINATION.⁷ Manifestations of art are also based on truth, even though they are the most glorious proofs of the heights to which the imagination can reach. Fine arts and literary works attain greater heights in the measure they draw their content from truth, not by copying truth, but by constructing the original work of the imagination as based on truth. Nothing is more fantastic than Dante's *Divina Commedia* wherein the imagination of the poet rums through purgatory, hell and paradise. Yet, the imaginative beauty of the thought gained through similes reveals the poet as a potent observer of reality. When Raphael wished to paint a type of Madonna, he wandered through parts of the Trastevere where the most beautiful women in Rome were found. There he saw and knew Parmorina and his models, but he painted the Madonna by reproducing the image which was recorded within his soul. People have said that Michelangelo used to walk up and down every evening, looking far off into

CALIFORNIA LECTURES

space. When asked what he was looking at, he answered, 'I am looking at a dome which is being constructed within me'. That was the dome which he reproduced in St. Peter's! And yet, St. Peter's never would have been created if a thorough study of architecture had not furnished the material for its construction. Thus, Greek art has survived all other arts as though it were immortal and superior to them all. Characterized by a close observation of the real, as well as by a fusion of all the details of beauty possible in the human body, this new creation of forms makes a striking appeal through the Greeks' rendering of complete and perfect beauty.

TRUTH POSITIVELY SOUGHT FOR IS THE BASIS OF THE SCIENTIFIC PRODUCTION OF THE IMAGINATION.⁸ Our times mark a great progress in civilization as compared to past centuries. This progress is due to the fact that the human has used positive research of truth as the basis for the imagination. Because of this, imagination of humans has been able to invent all the wonderful appliances in existence today, whether in the field of electricity, mechanics, chemistry or biology. Our forefathers, in their wildest imagination, could never have pictured a world where humans would send messages from one country to another, across oceans and speak in a normal voice between Paris and Rome. Neither would they have imagined where humans now fly and how, as guardians of mankind, they could drive from themselves the scourge of infectious diseases. No one in past times could have fantastically imagined the rich productions of today.

THE CHILD OF TODAY⁹

Education must prepare the modern child for the renewed civilization of today, a civilization based upon positive research of truth. Today's child is eager to grasp the truth through hand, eye and ear, and with precision. Today's child is capable of mental concentration. Just as the body seeks the elements which satisfy its hunger and then transforms them in the animate workings of assimilation, so the child nourishes himself with truth, organizing within himself the constructions of the imagination which create the beautiful and the good. Thus, we will help his intellect which tends to organize itself, to go on, to experiment, to acquire knowledge until he can more

SAN DIEGO

and more perfectly accomplish the effort of intellectual growth. Therefore, today's child is destined not to represent our inferior community, but to surpass us some day; this will in turn be a triumph of light over darkness.

Eugenia Andriano and Mrs. Elisa Harrison both stated that Montessori lectured in four California cities, San Francisco, Oakland, Los Angeles and San Diego. Indeed, the face page for the lectures wrapped in the red ribbon which Eugenia gave me in September 1969 has typed upon it: 'Lectures of Doctor MARIA MONTESSORI ... LOS ANGELES, SAN DIEGO, SAN FRANCISCO CALIFORNIA ... UNITED STATES OF AMERICA ... A.D. 1915 ... Copyright.' Three San Francisco newspapers, the *Examiner*, *Chronicle* and *Post-Call*, document both the San Francisco and Oakland lectures. As of this date, 1 January 1997, no newspapers in Los Angeles or in San Diego have been searched for notification, if any, of Montessori lectures delivered in those two cities, so the identification of the five specified to have occurred in Los Angeles and the two in San Diego are not verified at this time.

Unlike the prior lectures whose subject titles are the responsibility of the editor, this is the subject title which Adelia Pyle typed at the head of this 19 July 1916 lecture of Montessori, presumably given in San Diego, but both the city and location within that city are yet to be documented, as of 1 January 1997.

Obviously Maria Montessori expresses more optimism here than a present-day reflection on history subsequent to her would allow. The so-called academic world of scholarship analyzes early, or primitive peoples as subjective and characterizes their views about nature and self as childish. Montessori criticizes the old method of education and teachers for 'reading' into children and, consequently, for imposing upon them a style of education which violates their natural development. What is new? Prejudice, particularly that insidious 'adult' prejudice which claims to itself that 'grown up' carries with it the prerogative of knowing what is right and wrong, proper and improper. If we take but one academic example: a very popular Western book, entitled *Before Philosophy*, by so-called scholars the likes of Henri Frankfort, Mrs. H.A. Frankfort, John A. Wilson and Thorkild Jacobsen; first copyrighted in 1946 and first titled: *The Intellectual Adventure of Ancient Man* – a prestigious and, we come to find out, presumptuous title, published by Penguin Books Ltd, Middlesex, England. The Preface states: 'This book is an attempt to understand the view which the ancient people of Egypt and Mesopotamia took of the world in which they lived' any teacher would make a parallel claim about her and the world of children.

The scholarly authors go on to contrast the 'primitive' peoples with 'us' scientific people and compare the evolution of thought to a child growing into adulthood; 'primitive' peoples are mythopoeic, subjective in their views whereas 'we' are speculative, objective in our views! So 'primitive' peoples invented gods to bring reason, order whereas 'we' use science to create order!

I reproduce these capitals as they appeared in Adelia Pyle's typed text.

Montessori refers to one of three places in the *New Testament* wherein Christ speaks to his disciples and the people listening to Him about children: Matthew, 18:1-4, Mark, 10:13-16 or Luke, 18:15-17. Christ warns all that they should imitate children because '... of such is the kingdom of heaven'.

CALIFORNIA LECTURES

5. Adelia Pyle's typed text contains this division within the 19 July lecture, indented and capitalized as I have reproduced it.
6. Montessori refers to Denis Papin, b. 22 August 1647, d. c.1712, a French inventor who developed ideas concerning the steam engine and also an internal-combustion engine powered by gunpowder. In or about 1670 he assisted Christian Huygens and later Robert Boyle in developing the air pump. In 1687 he wrote about an engine using a piston and a cylinder, driven by steam. Thomas Newcomen, an Englishman, developed an atmospheric steam engine to pump water from a Birmingham coal-mine in 1712. James Watt, a Scotsman, came to England at age eighteen, studied the Newcomen steam pump and in 1774 formed a partnership with a manufacturer, Matthew Boulton, to build an improved steam engine. Trevithick, Blenkinsop and Hedley successfully invented, built and operated several steam locomotives in England between 1797 and 1813. Montessori certainly knew history, especially to center the discovery of the steam engine in Papin who, in fact, was its originator.
7. Adelia Pyle typed this sentence in these capitals and, as editor, I have replicated the statement, merely rearranging the paragraphing.
8. Again, Adelia Pyle typed this sentence in capitals. As editor, I reproduce this, but add what to me appears proper paragraphing.
9. As before, Adelia Pyle typed this division within the text of this lecture.

SAN DIEGO

The imagination¹

Lesson of 19 July 1915

Be assured that the greatest preoccupation of educators is the development of the imagination. With the imagination we bring together the highest faculties of the mind. The imagination elevates and goes above that which is simply positive; first, to the abstract, then to the creative. All the superior work of the schools, even schools of little children, is ultimately creative and is helped by the imagination. All who educate children know how difficult it is to lead the child to abstraction and to construction with imagination.

All educators know how difficult it is to lead children to the abstract and to construct with their imagination. Yesterday, I said that one of the criticisms of my method is that it does not assist the imagination because my method leaves children attached to material objects. I suggested that a contradictory response could be given to this criticism by the schools showing how they bring children to production of their students' imagination. Furthermore, one could also answer this criticism theoretically. I noted that two paths exist in the education of children. One is the common path currently followed in the present schools; the other is the path in which I believe. The teacher in the common path currently followed deludes herself, I believe, by thinking that it is she who must lead the child's mind from the concrete to the abstract and the imaginative.

According to my idea, on the other hand, the child should be allowed to exercise himself freely in the work organized for him. When the child exercises himself freely in the work organized for him, all of his activities develop themselves automatically. So, if the child is free to exercise himself, we need not lead him from the concrete to the abstract. We need only to watch him as he goes and we will see his development in his manifestations of work. This is what is so interesting when we observe the child working, and completing his work in this way. He rises from the concrete to the abstract, climbing to it, as it were, and he stays on the abstract level for some time, doing spontaneous work with his mind.

CALIFORNIA LECTURES

An example is the child who has been working with the material for arithmetic and geometry. He does just as much as is necessary for him to exercise himself working with the materials, then he begins to do abstract problems of his own accord. Or the child composes his own problems, or makes geometric figures without the materials. When the child works in this way, he naturally takes very much less time with the problems than he took when working with the materials. The child has the impulse to do more quickly what he did slowly before, as though within him the abstract corresponded with some deed in his life, and to that law of all life which is called the law of minimum effort. By this I mean that the child seeks to accomplish the greatest possible result with the least possible expenditure of effort. Indeed, when the child has matured in his power of positive work to the right point, he leaves the didactic materials and does work without them, as though obeying this inner law of minimum effort.

When the child has completed an abstract or imaginative work, he returns to seek the material again, not necessarily the same material or the material of a successive difficulty, but some material with which he exercises himself again. So, as we observe the child, we learn to see that the child needs to progress, taking more from the environment. The child has need of maturing through this use of external material in a positive way. These are some of our psychological observations. But when these observations have been made, the explanation follows easily and naturally the same path which the child so naturally follows, because it is necessary that the child should mature something within himself before he is able to lift himself to a higher level. This is the only way the child can supply the motor force to raise himself to the higher level because, in order to create, the child must have accumulated the material on the lower level.

But unless the child has the freedom of exercise which matures this motor force, the flight of the child's mind would be impossible. It seems as though what comes to the aeroplane is coming to the child's mind. One cannot imagine an aeroplane which flies continually in the air without stopping. It is a fantastic idea. There must be a place where the aeroplane is prepared, and there must be also a level along which it can

SAN DIEGO

slide before it rises. The aeroplane flies as much as corresponds to the force which has been given it and then it returns. We must always have the solid earth to which to return and replenish ourselves before we fly again. So also a bird comes out of an egg must attain a certain maturity before it can fly. All flight implies a certain maturity of organization; the very concept of flight contains the concept of maturity.

So we help a child fly, by helping while he is on the earth, aiding him to replenish himself. But when the child flies away from us, we can never give the child that inner force which will make him able to lift himself. The mind of the child rises because the mind of man is made to rise. Indeed, the child's instinct is to lift himself; such is the law of the child's being. And yet, instinctive as is the child's rising up, nevertheless he could not rise up and fly if he were empty. He cannot make a strong construction without a strong and positive preparation formed on the positive and on reality. So, when we find a work, a material which attracts the child strongly and holds his attention, the child takes from it ideas for culture as well as the superior maturity necessary for culture. Thus, when we have found such materials, and that exercise develops, we have done all in our power to help the child take flight.

Especially in elementary work, we find children fly far higher than we had even expected. Often the child makes a composition with such freshness and richness of ideas that the teacher herself could not have done as well. Some geometrical problems which schools find it hard to make children understand, we find *our* children are able to solve by themselves because the materials bring them near to resolving the problem. Often this occurs without our having even given the child the problem or teaching him how to solve it; the child will himself find the problem and bring it to us already solved.

But what happens in the regular schools? The teacher is the one who wishes to make the pupil follow her to the understanding of her own abstraction. But the teacher leaves the child, after she has artificially lifted him to a great height. Then, the child steadily goes down, for he has never acquired the power to fly into the abstract realm by himself. All teachers recognize that the greatest intellectual fatigue of the pupil is that of rising to heights without any inner impulse. The

CALIFORNIA LECTURES

teacher also experiences tremendous strain in the work of trying to lift all these children's minds which of themselves have no lifting power; the teacher experiences strain in trying to make the child's mind create when it has not sufficient material with which to create. This effort of the regular school teacher may be compared to the effort of a chauffeur who tries to push the machine with his hands after he has turned off the motor! On the contrary, if the motor gives power to the machine, then the chauffeur's work is merely to direct the machine's force.

So, we consider the problem of educating the child's intelligence to be the problem of finding and giving to the child the material which will develop this inner motor force. The development of this inner motor force will enable the mind to work by itself, thus directing the force and guiding it. In all of this effort, there is really only the principle of liberty, the liberty to fly as well as the liberty to use the materials because the child must be free to choose that work necessary for him and to remain at that work as long as his nature demands that he do so. The proof of this comes from a wider experience, but one can also take proof from that which exists today. The child, for instance, who is not given liberty of the mind, who is forced from the outside to rise up and to create, is a child who is unable to produce anything great by himself. On the other hand, we see in the production of great geniuses that they contain a positive and exact content. These geniuses do not construct with something vague, but with precise and exact real products of their observation. They construct with what they have observed with great precision and exactness. We will take some examples from literature; literature adapts to this specialty since it is made entirely out of material within the author's mind.

We know that children in schools have great difficulty in writing compositions. When asked to do so, the children's attitude is to read books and to get ideas from others. But the attitude of a person who is about to compose something is, or should be, an attitude of thoughtful meditation to prepare him for the writing. People do not see children respond as though to the call of an inner voice asking them to go and write something. Rather we see children in the grip of a great difficulty,

SAN DIEGO

that is, of trying to write something out of emptiness. Let us take some extreme examples from Italian schools where children are still kept in absolute slavery, as it were, to the will of the teacher. I do not know whether such schools still exist in this country, places where pupils are still forced to sit still and listen while the teacher teaches. But I do know that Latin children with the richest intelligence and imagination do so. Italian teachers found that their children were under such strain, in such difficulty in attempting to write compositions that hygienists stepped in with short and easy suggestions for getting them to write compositions. So hygienists and teachers devised a method for teaching the writing of compositions. Notice, first of all, the contradiction within this method, that is, the confession that children do not succeed in composing and trying to teach these same children to succeed in writing.

So Italians teach a class of children to compose in this way: first, children make so-called oral compositions. The teacher begins to prepare them by giving them a small composition of three sentences, all three logically connected. For example: 'E. did not know his lesson'. This is the cause of the happening. (No the idea is that the child becomes inspired by the subject chosen by the teacher instead of by his own subject!) Secondly, the fact in the composition is exemplified by the second statement, 'The teacher scolded E.'. Next, the third statement or conclusion becomes, 'E. cried and promised to do better'. The student is then required to construct another composition similar to this. An example would be: 'G. spilled the ink on the floor'. Then, the child constructed the second statement by asking himself, 'what happened?' The second statement becomes, 'The floor was spotted'. However, three sentences are required, so, to introduce a little variation, they make the third sentence to be, 'The teacher scolded the child'.

This is a sort of logical plan for the making of compositions, but another is a psychological plan. An example would be, 'G. pulled my hair'. This illustrates the impulse. The second is, 'I felt a pain'. This presents the feeling. Then the third statement, 'I removed his hand from my hair', is the act of the will. Now, the teacher gives a theme to the children. For instance, 'A. made me smell the ammonia'. The children are asked to give statements showing feeling and an act of will. 'It smelled

CALIFORNIA LECTURES

bad' and 'I do not wish to smell that again' are examples. We might say that something is wrong, if with the help of all this hygiene of the teaching of writing compositions, nothing better than this is produced! We should follow another path, a path where the child has more liberty and, therefore, more possibility for the development of the creative power.

But even if we give the pupil absolute liberty of mind without any guidance, we do not give him liberty to arrive at true composition writing. Just to leave the child's mind free to compose would be very simple and easy, but such an approach is insufficient. An order within which to work as well as a culture for the mind are necessary to make creation possible. If, for instance, we go to observe great works of art, works of the imagination, we find that these works continue to recall us to reality. There is a measure of reality in them which we might call the measure of the genius of the creator. These great works of art always come from an inner impulse, an inner impulse so well described by Dante: 'I am one who, when life inspires from within, I note it, then from within in what manner it dictates, I express it'. In other words, love inspires and love dictates before Dante could produce. Two inner forces are necessary to create: the force to give the impulse and the force to dictate in order to make production possible.

The greatest poet of our day, Carducci, asked to write an ode on the death of Garibaldi, responded: 'I cannot write except when I am inspired, not when I am ordered, but only as I am inspired'. Yet Carducci was a great poet as was Garibaldi a great man and his death a great event. We need not be surprised, therefore, when the poor little child in elementary school needs the teacher to give him three sentences in order to write a composition! Until we come to the point where we see that the child can compose only when he has the inspiration, we are not on the right path for the making of a genius. We should ask ourselves why we are so cruel as to ask a mind to compose and create in the manner in which we adults do. We have no right to inflict this cruelty and suffering upon children.

As we study great works of art, we see that those things created by imagination are always in close touch with the real, if they are to be great and wonderful. In fact, we admire great

SAN DIEGO

creations of the imagination, when the imagination flies high but is based on something solid and real. The imaginative ideas of Dante, for instance, are very admirable and beautiful when he draws his comparisons from something in nature, something real. So, if we ask ourselves what we have to do to give imaginative impulse to the child's mind, we have this to do: we must wait until the impulse is there and exists of itself. These great works are miracles which cannot be compared to that smaller work of the intellect which makes a discovery. Of the former great works, no one can say, 'Even I could have done that'. Certainly, however, if we give the children the possibility of observing things and of being sensitive to these things, we are giving children a help to the possibility of being creative. But, in addition, all these superior manifestations of the human mind have a greatness if they are based on a certain measure of reality.

Take an ordinary conversation as an example. If a person wishes to say something complimentary to another person and to imagine something very beautiful about that other person, he must imagine something which has a real rapport with that person. This connection to the real is required to make the compliment effective. The finesse lies in the measure and in the grace of this imagination. If the person is not able to judge and observe what is really present, the compliment has little effect. We say that a person is awkward who attempts such a compliment and is unsuccessful; we say it is a fine compliment, if the person has adapted the compliment to our real qualities.²

This is one of the finest sonnets ever written in the Italian language in praise of a woman. But, in order to write such a sonnet, it would be necessary not only to have the inner inspiration, but also the ability to reveal these fine qualities. But, in all these impulses and flights of the imagination, the poet remains true to that reality which created as well as inspired those impulses. The object of the creation of the imagination, the impulse itself, must come from reality and it must be dictated by reality.

Imagination is present in the second sonnet, but it does not lift itself. The lack of beauty is due to the fact that no measure of reality is present and no measure of truth dictates the imagination.

CALIFORNIA LECTURES

So it is with sculptors, the more their inspiration comes from the true and the real, the greater is their art. The great sculptor is not he who copies the real, but he who is inspired and who has prepared himself from the real. To copy reality is very different from being inspired by it and creating something as a result of being guided to do so by the reality. The great painter Raphael, for example, would spend much time in that section of Rome which is famous for its beautiful women because he wanted to paint a Madonna. So he painted a Madonna not out of nothing, but out of real material from nature. Yet we know that no woman ever was a model for his Madonna, not even the very beautiful woman whom he loved. He tells us that as he went about observing real, beautiful women, an ideal formed in his mind which he was inspired to paint and became his Madonna.

We also know that the great Greek artists were close observers of the human figure. Thanks to the Greeks' interest in gymnastics, they beautified the human figure in every way and, since they walked about their streets lightly clothed, it was possible to observe the beauty of the human figure. Certainly, Greek statues were not copies of any one person because recent anthropological studies have shown that these statues contained the perfect average measurement of the human race. The Greek beauty came from the impulse to the imagination generated by the reality.

We cannot compare, therefore, observations of reality with flights of imagination; they are successive steps in the same process of creation. What is necessary is to give liberty to observe those things which generate feelings and to observe them for as long a time as is necessary for the inner maturity. Then, the liberty must be given to express that which the reality inspires and such proceedings are possible only in an environment of peace, quiet, calmness, allowing nature the time necessary to accomplish these acts of creation. That calm and quiet which are not meditation, but now inspiration, are necessary for productions of higher and superior kinds of creation. This is a peaceful work, an organized work in which the peaceful ascent occurs and in it lies the care and the treatment of all the inner life of the child and the possibility of production from within the child.

SAN DIEGO

Now, in concluding this too complicated matter, we may have a technique for the development of the imagination which does not lead the child to that which we wish him to imagine, but it may make the child capable of being free to imagine as well as give the child the material reality from which to imagine. We rest on this technique of the preparation of the child's imagination like people who hope and wait for something to happen and for products to appear. This method establishes a place where the path of the child's imagination will almost certainly reveal itself and we, perhaps, have the greatest opportunity to observe the children gathering the fruits of their individual imaginations.

This manuscript Adelia Pyle heads as 'LESSON OF JULY 19th ... THE IMAGINATION.' Given the fact that the second lecture, which she also typed, occurred on 19 July 1915, I only can assume that Maria Montessori gave a lesson called 'The Imagination' on the same date. Also, given the fact that the three San Francisco newspapers which announce her lectures in San Francisco give the date of her appearance, both at the demonstration school with the children and at the lessons given to teachers, as 6 August 1915, I presume this 19 July 'lesson' occurred, as stated, in San Diego. However, as yet, no evidence indicates Maria Montessori also offered lessons either in a school or to teachers in San Diego, so this reference stands as a mystery at this time, 8 January 1997.

1. Unlike the prior lectures whose subject titles are the responsibility of the editor, this is the subject title which Adelia Pyle typed at the head of this 19 July 1915 lesson of Montessori, presumably given in San Diego, but both the city and location within that city are yet to be documented, as of 8 January 1997.

2. Here, Adelia Pyle's typed notes include a parenthesis on the top of what is marked page 6: (Two sonnets follow here, both in praise of woman; one most graceful, the other rather crude.) Then six (6) paragraphs follow and another parenthesis appears before the first and the second paragraphs. The parenthesis before the first paragraph reads: (Speaking of the first:) - that is, the first, 'graceful sonnet'. The parenthesis before the second paragraph reads: (Here follows the second sonnet referred to above.) An effort to find reference to these sonnets has been unsuccessful at the time of writing, that is 8 January 1997. I might offer a contemporary set of examples, though not sonnets properly speaking, but only poems: a graceful poem by Maya Angelou, titled 'Phenomenal Woman'; and a 'rather crude' one - not as to form, but as to manner of speaking, yet intended for effect - by e e cummings, as found within the edition titled *100 Poems*, specifically number XIX, whose first line is 'she being Brand'.

San Francisco lectures (Panama Pacific International Exposition)

The scientific teacher according to Maria Montessori: the 'new type' of teacher, Part 1

Lecture 1: 6 August 1915

The characteristic fact in this method of education is that instead of having the teacher who instructs the children or guides them step by step, we substitute materials for development and we emphasize organization of work studied in a positive and experimental way so that it corresponds to the spontaneous activities of the child. We place material in the presence of the child and there comes about a 'reaction', as one calls it in experimental psychology. These objects bring about the phenomena of spontaneous activity, reactions, and so one puts in the presence of these children those reactivities which provoke a continued activity. Certainly, we must not think of something similar to a chemical reaction. We must not think, for example, that putting these objects in the presence of the child that we get an instantaneous psychological change and the child suddenly develops. When one speaks of psychic reaction, one always presupposes a complex action of the individual's whole psychic organization, so instead of using the term psychological reaction we will use more familiar names.

We speak of objects and exercises which potently attract and hold the attention and interest of the child, because of which the child loves to occupy himself at great length with those objects, independently from an outside person, as, for instance, the teacher who would have an influence on him. How many times does it also happen in the family that a little child is not

SAN FRANCISCO (PPIE)

heard from for some time and one goes to look for him and finds him industriously occupied in some activity. We seek so many means by which the child will be industriously occupied and we can establish upon this basis the possibility of the child educating himself by means of these objects. It is in this way that the child can be liberated from the direct influence of one person and still be educating himself. In this way our type of education changes from that in which the child is always the receptive subject, receiving from someone else, and who becomes instead essential and exclusively an active being.

So, as each child chooses his own occupation, he is not only absolutely active, but he is active according to his individual tendencies. This has strayed far from the theory of pedagogy because it is developing spontaneous and free individuality. In practical reality, it is not possible to bring about this liberty, for there is always a person who is acting upon the child's individuality. We will occupy ourselves at length upon this point of having material reactions and upon studying the reactions of the child with the material, that is, seeing how the child reacts to the material. Today, I wish to stop and talk about the subject of the teacher, the new type of teacher, who develops in this school where she is always watching the spontaneous reaction of the child.

If we came to exclude the teacher who instructs, that is, the teacher who imposes herself as a superior being, superior to those whom she is teaching, we can ask in this case, 'What are we doing?' Are we lowering or raising the type of the teacher? Without doubt we are making a profound change in the type of the teacher. She becomes a person who, besides acting, observes the person. Her virtue consists in never interrupting the work of the child, but, at the same time, giving help where she sees that help is necessary. She gives this help in such a simple way so as to reduce her action to the smallest possible amount. One might say that she is serving while she is directing this class of children. If we consider this type of teacher in relation to the type of teacher to whom we are accustomed, it would seem almost that she is being humiliated in comparison to the other. But, if we study the history of the transformation of the type of teacher, we will see that she is not being humiliated but that she is taking upon herself the new type which is brought by evolution.

CALIFORNIA LECTURES

Let us compare the old-fashioned type of professor of the university. The old-time professor had a high desk upon a platform which seemed like a throne. Compare him to the modern professor of experimental science. The pupils of the old professor sat beneath him to listen and in the Middle Ages those professors wore robes, ermine and wigs and they were covered with high dignity. Because they were giving out the absolute verdict or word the matter they spoke of was accepted without doubt, and not only was this believed but was sworn upon as being the verdict of the teacher. The whole effort of the pupil was to learn absolutely what the teacher taught because that was considered Truth. The pupils held him in great esteem and respect. Sometimes this same dignity allowed a certain sense of the ridiculous to creep in, for while that which the teacher expounded was great, the pupils permitted themselves to laugh a little.

Let us look at the modern professor of science. The hall of the students has changed entirely. There is one person who remains standing alone – the professor. He has a particular space before the students because the first step is the first row of seats where students are seated. The students look down upon him from above, almost as though he were in a hole. Often this professor wears a sort of workman's blouse, resembling the cotton blouse of the laborer. It is not a rare sight to see him, when the table is soiled, take a cloth and wipe the table off. Without doubt, he gives himself none of the old-fashioned airs of dignity. What is interesting is not the work of the teacher, who may not be an orator. There is no affectation of speaking since these great teachers often have a simple, sometimes rough and crude way of speaking. They do not fill their discussions with rhetorical figures. They do not tell little anecdotes and stories to cause laughter in order to hold the interest of their students. They do not try to give a grandiose or great finale to the whole lesson. One might say that this humble person has forgotten himself, is not preoccupied in any way that he, personally, may be well known or recognized, and the students as they leave the hall realize that they did not notice how the professor was dressed or how he looked that day. What was of interest was the fact of importance which the professor tried to demonstrate. The greatest point

SAN FRANCISCO (PPIE)

of this demonstration was that the professor was showing them the truth.

Now, what concerns and is of interest to the experimentalist in electricity or one studying chemistry or biology is the fact that it is true. We can say it is the truth that is being shown. One cannot say that this fact simply attracts the attention of the students, but it attracts the passion of the students and they know that - appearing at great length for these lessons. They know then that they are rising to that height, the point when they are able to verify what the professor said was true or untrue because the professor is not teaching the truth absolutely, but the professor teaches the means, the paths by which this truth can be found and those students who look upon him from above are his judges either at that moment or in the future. These professors generally are not those who have studied the science in thought only, but are those who have produced something useful and beneficial to society. One may add to this that they did not only have instruction but they had virtues. That is, they had a special moral preparation of personality. The important virtue is the great and profound patience which is the main characteristic of the ones who do research and the singular humility of them.

Let us take for example, Koch, the discoverer of the bacteria of tuberculosis. Think of him dressed in the workman's blouse and standing for hours and hours studying what tuberculosis patients expectorated, thinking all the time that this was a great and dignified work, not because it gave him an external dignity but because it rendered him beneficial to humanity. Think of those students who were studying tuberculosis and in order to find out the truth of whether the bacteria of an animal could be transmitted into the system of a man, injected themselves with the bacteria. Think also of those scientists who in order to find out whether the bacteria of cholera could be taken into the system through food would eat a portion of the bacteria in the form of food to test the matter for themselves. Think of those who, because of looking constantly into a microscope, lose their sight, and of the many who died doing chemical research into reactions by putting together two substances which exploded upon contact with each other. All of these are people who were humble to the point of sacrifice.

CALIFORNIA LECTURES

Now you see that it is not in speaking of great ones, but in doing positive and practical work that one goes towards progress. Mere voice or word cannot make progress. It is our dedication, our real work which can bring progress. While the professors of the universities limited themselves to saying great things, the world did not progress. The great progress in science came when there was this humble and patient work. Something similar must come about in the transformation of the teacher. We must pass from the type of teacher who talks from a height to a type who is apparently humble, and who works bringing about real benefit. This teacher must prepare not only with a culture which is easily acquired but with attitudes of character, called virtues, which he may acquire little by little in the exercise of his work. This is not easy to obtain in a teacher who is accustomed to teach by the methods used up to now, what we call the old method. The point is that the teacher must not learn a new method but must acquire new attitudes. That is why this is not so easy in actual practice, although it seems so simple in words. It is necessary that the teacher begin by learning this, that is, to step down from her platform, to divest herself absolutely of the older methods – as men have done who, having become monks, must discard all they have considered their former dignity.

The more the teacher has been able to lose or forget her old position the more able she will be to become a good teacher in this method. Another thing which she must learn is to be quiet, because she must not give lessons and, therefore, she must not give discourses. That is much more difficult than learning to talk – and one learns only after long practice. How many times does the impulse to talk at length come spontaneously! Another thing which the teacher must learn is to contain, to hold back the impulse to intervene, to counsel or to advise. This is a most difficult thing to learn. Who is there in this world who does not possess the instinct to give counsel and advice? So much more when they are put to work as teachers. Teaching is a work of inhibition; a work of the will which is difficult to follow. The greatest height of the ability of the teacher will be attained when she had reached that point where the children can work entirely alone, without her help in any way. The exclamation of the teacher who has come to the point of

SAN FRANCISCO (PPIE)

triumph in this method is 'there was nothing for me to do!' One of the signs of great ability in one of the teachers was the question asked her by one of her pupils. The story runs as follows:

One of the children who had learned to write and was at the height of his joy because of his ability to write went to the teacher and said to her, 'Signorina, do you know how to write too?' The teacher had succeeded in directing and developing and knew how to hide this to the greatest extent possible; such is the most important, the very greatest triumph of a method which has as its principle, the liberty, the development of the individual child.

The teacher must learn this hard task of being patient and how to observe, because the teacher must observe always. What are the great scientists doing, the biologists for instance, who are constantly looking through microscopes? They are observing, and in this observation they are extremely patient. Without acquiring patience one cannot acquire the ability to observe, and on the other hand, if one does not know how to observe, it is very hard to acquire patience – these two things develop together and give to those persons who have developed these virtues an entirely different characteristic from other teachers or people.

Let us give this example: A lady asks a scientific man who has done a great and lengthy work to show her those things which he has observed at great length. This professor, who is so busy and has so many things to occupy his time and his dignity lends himself gladly to this task of showing these things to the lady and to the preparation with great meditation of these things which will show her these interesting and minute details. While he is preparing all these things, time passes. The lady begins to regret that she asked this of the professor. She begins to say, 'Oh, I have a great deal to do today'. She begins to seek an excuse to escape, although she really has nothing to do; but it is not the occupation which prevents her from waiting, it is her incapacity, her restlessness, her inability to wait for the professor to finish explaining his lesson to her. It is because this lady is a prey to all her impulses that she is not able to wait, and it is a person who

CALIFORNIA LECTURES

is always busy doing something who can never wait when there is something really to do. It is the opposite type from that of the professor and when the professor shows what he has prepared in the microscope, the lady sees with her eyes but she does not see anything really. Then she says 'Oh, how much time I have lost!' In order to see, it is necessary to have a special attitude and a separate interest within oneself to see that certain thing.

For example, if he who looks through a microscope or telescope has not the habit of observing, he will see nothing. If a professor is speaking to an untrained audience and is trying to show them a small difference between two small objects, he is working in vain because they cannot see these differences. To learn to see, to observe does not mean simply to look. It is to add to the seeing of things which all do not see, to acquire and attain an attitude of observing. That is why in this Course, part of the preparation of the teacher consists in observing the children. What does one do in those hours of observation? One stands aside and one observes. Many ask, who is it who explains and tells us what we must look at? If I told you, then it would not be an observation, it would be a lesson. To observe means to be there, means to be making an effort to see, not to just see those things which one can see easily, but to see the special phenomena which will develop in the children. If the person gave explanations, the children would be disturbed and so the only advice which we give to the teacher for observation is to be immovable and silent, a thing which is very difficult. When this has been learned, already a great step has been made in preparation.

An interesting example comes to my mind: it often happened in our schools in Rome that people, claiming to be deeply interested in these phenomena of the children, said to me, 'Oh, I beg you to show me all these facts which are spoken of', then I would say, 'if you stand at one side and look, you will see'. And they would say, 'But no, I want to be shown'. I then would say, 'you see there a child who is taking and removing the cylinders from the block and putting them back in place; you must stand and see how many times he will repeat that work and then you will stand and observe'. The lady would stand and watch and the child would take the cylinder out once and then would put

SAN FRANCISCO (PPIE)

It back in place again, repeating the work over and over again. After the child had done it two or three times, the lady would say, 'Oh, yes, I have seen this now and I want to see something else'. The thing to see is not the putting in and taking out of the cylinders, but the thing to be seen, to be observed, is to what point the patience of the child and the concentration of the child will last in the taking out and putting back of this object. If this child persists in this exercise fifty or sixty times in succession, that is the thing that is interesting to note. It is such an interesting fact that the person observing should step back as quietly as possible and stand with bated breath so as not to interrupt the little child. I have never yet found people who were able to follow patiently the work of a child to the end - even when the people told me that they had crossed the ocean specially to see that phenomenon. So it is very difficult to show a class of children to people who do not come to study, but just come out of curiosity. These people want to see one thing and then another and they do nothing but interrupt the children. Since the important thing in our method is to make the children remain persistently at one exercise, these people do not see anything. To feel the interest in this special phenomenon of the child with more and more liberty is what is necessary in the teacher.

Psychologists always say, and it is often said by people generally, that little children are unable generally to hold their attention at any one thing. All say this. All know it because a child first sees the light and then looks at that and then at this, then goes and bothers its mother and little by little it sees a ball and then a block and then it cries. Now, if this is so, to see a little child repeating the same exercise fifty times in succession is a phenomenon which is interesting, and when this intelligence means an interest in observing is acquired, it happens often that a simple fact with one of these children will attract the aesthetic attention of a hundred people.

It happened once in Rome that a cultured and intelligent lady asked permission to come to one of my lessons. I invited her to come. There were about a hundred students who were standing around the room quiet and silent. The lesson consisted in having a child touch a sandpaper letter. Many times the children themselves became interested in watching one of

CALIFORNIA LECTURES

these phenomena. That day there were about ten or twelve children who were watching the lesson. One child continued in the most perfect silence to touch and retouch the letter; the twelve children were interested and watched in perfect silence; the hundred people watched with great interest and in perfect silence. I naturally stood at one side trying to control my movements as much as possible.

This lady said to me at once, out loud, 'When is the lesson going to begin?' Everybody told her to be quiet and I asked her to be silent because this was the lesson, but she said 'What is it to consist of?' I told her the lesson was in this child touching the letter. 'But what of these twelve children who are standing there and all of these people watching the child touch the letter? What are they doing?' I said, 'They are just watching the child touching the letter.' 'Oh,' said the lady, 'this is certainly a new method of insanity.' So, when the city of Milan wanted to found a school for the preparing of teachers, they said we want to give a great part of the time to observation. I said that is very good because that is the most interesting part. Then they said, 'But how must we organize this?' Simply tell the people that they must be quiet and look on. They said, 'Is it possible that people will stand for hours without talking and having explanations given?'

Our method is the entrance to a new path. Monks are not doing quite the same thing when they perform their exercises of silence and contemplation, but they are doing something similar. However, we have something which is much easier because it is not inner contemplation. We are after external facts which we can constantly see, but we must divest ourselves little by little of old habits. The old habits of acting a great deal and of talking much and of contenting oneself with words can make us easily fall into delusion and error. That which leads us to that difficult and narrow path where we go to seek reality, and truth in reality, and to prepare ourselves for this observation of facts besides just words: this is to prepare ourselves for this new method.

Now you are initiated!

SAN FRANCISCO (PPIE)

The scientific teacher according to Maria Montessori: the 'new type' of teacher, Part 2

Lecture 2: 7 August 1915

Our new type of teacher tends to resemble modern scientists who are far from people who act in a cold, hard manner. Such scientists are passionately interested in their work. They have reached the point of self-forgetfulness. They often forget even their own families. We know wives of noted scientists who are lonely because their husbands are so engrossed in scientific investigations. If such scientists are studying at meal time, they are often troubled and disturbed by being interrupted. A story is told of an inattentive, forgetful maid who forgot to prepare a meal for a particular scientist. Later in the afternoon, he asked for his lunch and she told him he had eaten. But he had been so absorbed in his work that he was unable to recall whether or not he had eaten.

The real scientist differs from the young doctor helping him not so much by culture, instruction or knowledge, as by a passion for the science. The professor's first assistant is perfectly capable of teaching and of preparing the material needed in an experiment. What then is lacking? The assistant still lacks that great love for the science. When the assistant enters on to this path of passion and love, he really enters on to the path which will make him a great scientist. Love, we know, does not come from studying alone but comes only when the student brings himself into contact with some natural truth or reality through which secrets are revealed.

What, then, is the difference between old students, or learned people, and the modern experimental scientists? Old students absorbed the knowledge of others and that knowledge was all they knew. They simply had to make it their own. The modern experimental scientist, on the other hand, not only absorbs and contains what is known, but he learns the means, that is, the method of discovering that real part of it, the actual truth. The bacteriologist, for instance, has the means of studying the microbe organisms and by studying these he may discover different or new diseases which might be known. In so doing, he has the power of finding new cures for diseases and

CALIFORNIA LECTURES

can benefit humanity. The chemist may discover materials not yet known; the physicist may discover forces not yet understood. Thus, scientists who have the means or method of experimental sciences are like those who have learned to read our book of mysteries, the Book of Nature whose content is Infinite. Such a scientist is like the man who simply has learned to read and, because of his power to read, has obtained a number of books which may reveal great things to him. The modern experimental scientists know how to read these infinite mysteries and, as a result, develops within him interest, a natural phenomenon. This interest drives him more and more into this research. Such a scientist is on the path leading to great discoveries.

When this same passion is born within the teacher, she will be in the same category with the modern experimental scientist. The teacher may have this scientific method in her hands for a long time. She might coldly try to apply it to the children in her class, without knowing precisely and surely whether she is really acting in the right way. But, if she comes to the point where she sees some phenomena in the child which interest her deeply and passionately, she then has the mathematical proof that she has entered on the right road. Then she will feel that she is attached to this school in the right way so that she cannot be separated from it.

Little by little the teacher will see psychic phenomena in the child's actions and will learn to interpret these experiences, these revelations from the child. When she feels this fascination and this thing which is more than happiness, she may be sure that she has provided the child with the right environment. When the teacher reaches this point of maturity, all the rest will come of itself. I spoke yesterday of the necessity for patience and constancy. When the teacher develops the method of the modern scientist, patience and constancy no longer exist in that form, but have been transformed into passion, a passion making her joyously observe the phenomenon before her eyes. Such teachers no longer need to learn to be silent and motionless. Our own absorbing interest in this developing phenomenon of the child makes us stand before it. We stand almost silent and motionless in an aesthetic state of happiness. We no longer have to learn to stand silently and

SAN FRANCISCO (PPIE)

motionless to one side so as not to disturb the child. Our own interest in watching the development of this phenomenon in the child makes it natural for us to stand silent.

The birth of this passion, similar to that of the modern experimental scientist is a central point or fulcrum upon which to build the personality of the teacher. Something similar occurs to the child who is applying himself. We see a child pass from object to object without stopping or resting himself at anything. While the child is in this condition of chaos and inconstancy, his education has not yet started. But, when the child begins to interest himself profoundly in one thing, showing a deep interest in one object and keeps repeating this interested observation many times in succession, then the whole personality of the child has begun to recognize itself. We begin to see development in the child and the child soon shows the same passion to observe which the scientist and the teacher (possess). We might call this *positive* direction and it permeates the development of the teacher, the scientist and the child.

The child becomes an observer, but not a tried observer, only a passionate observer. He concentrates so profoundly and repeats one exercise at such length that we can explain it in only one way: the exercise takes in his entire personality, even in the sign of a sentiment. That profound attention which we find in our children was our doing. This attention is so strong that external stimuli do not succeed in disturbing it. We see, for instance, in our schools fifty or one hundred people will often stand round watching a child who shows this spontaneous development, yet the children are not disturbed from their work. Sometimes when music plays and some of the children dance to the music, some other children are so absorbed in their work that they do not even notice this dancing. This profound concern and attention of the whole personality provides little by little that complex development which is characteristic of the children educated in our method.

This profound attention of the teacher has as its object the transformation which occurs in the child from this concentration. When, for instance, the child has reached a certain point of maturity by concentration upon these different exercises, then the child begins to go into abstract thought and to generalize. Those using other methods of teaching who have tried to

CALIFORNIA LECTURES

lead the child step by step to this point are surprised. In the other methods, it was the teacher who led the child or rather the mind of the child to the abstraction and generalization, whereas, here, in our school, it is the child's Soul which lifts itself of its own accord.

Now, this great phenomenon is passionately interesting to us in the actions of our children. When, for instance, the child has done so many exercises with the colors and shapes, he suddenly notices that the sky is blue and the table is a rectangle. Then, he will make an observation like this and say, 'Almost all of the windows of the house are rectangular' while the 'Flowers have different forms'. When visitors give the children little cakes, the children stop to observe that this cake is round and this rectangular. Then it is that we who have been observing and following this natural development of the child feel moved as we would feel moved by any great miracle of nature. An exchange then occurs between teacher and the child far from anything dry or barren. A far more profound union develops between the teacher who stands talking and others who stand listening and learning. We might say that in our method we see life developing and, at the same time, the love for this developing life itself develops.

The teacher is silent, yet says to herself, 'You are living and I am enjoying your life'. But it is certain that the relation between the teacher and the child putting himself through this method of experimental science is very different from the scientist and his object of study. This relationship is also different from the chemist with his material and between the biologist and inferior beings. The relation between the modern experimental scientist and microbes or insects or plants, for example, is not the relation of a common life and common habits between the scientist and the subject of his study. But, in teaching the student, (the) teacher and the child, as subject of his study, have the same essence. No wonder the interest of science is so great, but something more is born in the teacher!

In teaching the student, (the) teacher really sees himself brought back in the phenomena which he is observing, in the life he is studying. Teachers really develop a personal interest seeing human life is at its source, at its beginning. A wonderful feeling and another love is born in the teacher and there

SAN FRANCISCO (PPIE)

enters within the teacher and the scientist an Apostolic spirit. This Apostolic spirit sees not only the spirit of study about the child but the child object becomes a teacher full of lessons to teach us (as) his teachers. It is, as Christ said, 'He who wishes to be first in the Kingdom of Heaven must become like a little child'. The study of a teacher is like a study of the Soul. The teacher sees what is to be found there and also sees the path the teacher himself must follow to learn.

Here then in our schools children live freely and a person helps them to live freely and the person is not one who watches coldly but one who, we say, has accumulated all the interest of the human heart. The children may not at first understand their teacher. They are more conscious of the objects. As their interest develops in these objects, their activity increases and they work more. Still there was a person who offered them these objects which aroused such a love in them. That person then retired, leaving them with the object. There was a person who approached, gave a clear direction (after) the child needed to have some point made clear and then retired again. She said, for example, one word which cleared his ideas. She was a person who brought great clearness to his mind, was a great help in the understanding of things, without his having been conscious at all of having been disturbed by this person. The child was like a pilgrim and a wanderer in a new city, seeing many things when someone approached and gave him an explanation making him understand these things which he had seen.

A stranger goes into one of our museums in Rome, for instance, and someone says 'That is a Raphael and this is a Michelangelo'. The bystander helps by simply showing the stranger what was before him. But if the person had said, 'This picture was painted in such and such a year and is worth so and so much', then the value of the art object is taken from it. This same thing happens in the classroom of children. The child needs one idea given instead of having had his mind disturbed by a whole lot of ideas and pictures which would have prevented him from enjoying the simple object and the clarity of it. (As), for instance, the child simply sees that this is big and this is little, and so forth. So the teacher needs to give clarity with all the ideas in this same simple way by saying, 'This

CALIFORNIA LECTURES

is red and this is blue', and so forth. Then the child is told only that which is necessary and the teacher retires so as not to disturb the child with her own presence.

Thus, when the child was working spontaneously, he was not alone because someone was watching over him to see that he would not be disturbed and interrupted. So, when the child, after his concentrated work began to lift his mind to abstractions and generalities and when he felt the joys of this, he realized he was not alone in his joy. He saw the echoing emotion of the teacher who shared this joy with him. Then the child begins to feel the life, the passion for something entirely different for those objects which have attracted him up to the present, and that is, love for the person who has lived for him. When the child begins to be conscious or to notice the teacher, he also begins to notice his companions and to confide in his teacher. This feeling, then, has not been provided by the teacher but has been born in the child. This feeling of love is a connection between Souls. The Soul of the child begins to blend with the Soul of the teacher and the child becomes obedient. When the spiritual life has formed, it remains and grows and perfects itself because it is like a living being which has been generated and must therefore grow.

We do not have to teach the child to love his teacher as his companion because that comes with the growth of humility and patience and (these) appear quite naturally of themselves. In this environment, one feels that the creation of love is a great work of sacrifice, of education, of patience and one cannot bring this creation about with vain words. Certainly, the teacher does not teach love and morality, but she has the great consolation in seeing it born. People say that the teacher must be like a mother. But, perhaps, here in our schools, teachers alone really incorporate this fact of being like a mother. After all, the personality of the mother is characterized by this: with the sacrifice of her own life she gives the life to another, and there is no other means of giving life and so of being a Mother.

SAN FRANCISCO (PPIE)

Montessori's teaching of arithmetic

Lectures 3, 4: 9 August 1915

You are an imposing assemblage but all that I am going to do is continue the practical work already started several months ago. Today's lesson is really part of the old and not of the new work. Perhaps some members of the new class can assist with some advantage because this lesson concerns some of the (mathematics) material we use with the children.

However, part of the material used may serve to show that the children work by themselves as well as illustrate the way in which we present the material. We put the child in (a) relation with the object. This we call a lesson. In fact, the only lesson which we give puts the child in relation or in rapport with the objects. Then, from that point, the child exercises himself spontaneously. These acts of putting the child in contact with an object then of letting him act by himself continue through our whole method. So, we might say, every detail of a presentation contains the technique of the system. Really, the detail to which we come today is one of contrast and includes a whole lot concerning (learning) exercises. Also, the interpretation of this material and how this is used may serve as a guide (to you) when you are working with the other materials.

We always begin lessons at the same place. At present, we do not have all the (mathematics) materials at hand so we have to wait a few minutes until they arrive. Generally, when people begin teaching arithmetic to children they think they must begin by teaching numbers, those signs which are symbols of quantity. Today, people begin teaching arithmetic by teaching the children to count objects and these objects initiate the child to numbers themselves. These objects simply serve to help the teacher as a didactic means to make the cipher more clearly understood. And so, they call the object which the teacher uses an object which serves the number. Thus, in a certain way, if they could do without the object and still make the number clearly understood, they would consider this an advantage. So, today teachers do not consider the object as an advantage except insofar as it makes the number more clearly understood. The purpose today is the *number*. This is true from a

CALIFORNIA LECTURES

certain point of view because it is more of an initiation to arithmetic which is the science of numbers. We, however, consider a more distinct preparation for number to be necessary.

We have a very long preparation for number; it is not in direct relation with the number, but we think it prepares the mathematical mind of the child with a series of exercises which we consider a sensorial exercise. But these exercises which are called sensorial exercises are really complex exercises of the intellect. Our method prepares one side for writing and another side for arithmetic; the sensorial knowledge of quantity prepares a basis for the understanding of the number work (by the child). The child, for instance, exercises himself with these (red) rods of definite length; sometimes, perhaps, you can have the child put these rods in order according to gradations in length. So, for example, you will have seen him constructing and destroying the cubes of definite or different sizes. Also, you may have seen him putting in order the prisms which are also graded according to dimension. These objects differing according to dimensions are in a specific relation to each other. They have a different relation of quantity; the knowledge of the relation between the different quantities is a basis for (understanding) number.

If we say that a man has 100,000 dollars, for instance, we know the number but we do not necessarily picture the amount in actual money. So this *cipher* of 100,000 dollars represents a cipher and not *number*. Cipher does not make us familiar with quantity. To have an idea of quantity and the real relation or connection, we can take these two systems of rods (the red and the red and blue) which are identical to each other. This series accustoms the child through exercise to distinguish the difference in length through his eye. This other set of rods (the red and blue) is identical with the first set in dimension but differs because it is divided in sections by colors to teach the child difference in quantity by number.

These (red and blue) rods are the ones showing the difference in colors and they have been divided into measurements according to color. You will see that these three rods are the ones showing the difference in colors and they have been divided into measurements according to color. You will see that these three rods represent rods (red rods) of different lengths,

SAN FRANCISCO (PPIE)

The child's eye is already accustomed to recognize them. This other system (through) which we now give arithmetic is already recognized in its reality by the exercise which the child has already done with the (red rod) system. Although the child knows nothing about number, the eye has accustomed itself by seeing the rapport between relation and quantity many, many times. So there has already been a sensorial preparation for the presentation of this material (the red and blue rods). But you will see that these rods (are) in another relationship. The first represents the unit which represents *one* (1). The second which is double the (1) is two (2) and the third which is triple in length represents three (3) and so on up to four, five and six, to ten, because there are ten (10) rods.

Now, we use this set of rods (red and blue) when we begin the teaching of arithmetic. I would like to have you know that these rods used for the teaching of the quantity and number differ from the objects generally used for the helping to teach number in other schools. Other schools generally, for instance, give three (3) light objects and say one (1), two (2), three (3). If, for example, they first saw that one of these objects represents the number one (1), they then teach that the three (3) objects represent the number three (3).

Minds of $4\frac{1}{2}$ - and 5-year-old little children, however, often find difficulty in understanding this abstract thing, namely, that this symbol (3) represents three objects. If each one is represented by this cipher, then many children protest in this way: when teachers say 1, 2, 3, showing the object, the child will say 'No', 1, 1, 1. The child would not represent two (2) with the number two (2) but would represent it with two ones (1 and 1), that is, one and one. But where the object contains two or three, an object like this (red and blue rods) is more easily understood as differing one from the other. The three (3) differs from the two (2) and it is more easily understood that it is represented by a different number because they are three different objects representing or represented by three different symbols.

At the same time, the relation of quantity which goes with these symbols is well represented in these three objects because it is so very evident and clear that if the object represents two (2) that two of the object one (1) will enter into it and

CALIFORNIA LECTURES

the object one (1) will enter into the object which represents three (3) three times. Now you will already see that the child has overcome that difficulty of using the different symbols for the accumulation of the units, but that the child overcomes it with an effort. You will also see that all children overcome that difficulty of comprehending because they do not only have to conquer the difficulty or make the effort of understanding this quantity of accumulated units connected with the one cipher but they must with their minds do the other exercise of uniting these units, so much so that elementary teachers sometimes, in order to overcome this difficulty, attach the units together in a little bundle.

All of that work never gives the clearness which a simple object gives. This simple object is divided into three (3) parts (by red and blue colors) and then, also, the child's mind more definitely and easily enters into the dry and hard field of arithmetic. To know whether the child is making an effort adapted to his potentiality when he is doing something, we must not only base our ideas upon the fact that the child learns, but we must judge by the pleasure or repugnance which children feel towards the doing of the exercise. That method which gives a clear idea without calling forth an irate effort of the mind succeeds not only in making the thing be learned but in making it be loved. Then if the child does not feel an intense joy or pleasure in the doing of the arithmetic exercises, we must feel that we have succeeded in making him learn something with a mistaken effort. But if the child learns to love arithmetic with a spontaneous love of repeating the exercise over and over again by himself, we may then believe that we have found a method which *did not* call forth an irate effort in the child's mind.

Look at these sensorial objects from a different point of view, not that of teaching arithmetic. Look at them from the psychological point of view. Experiment and see whether the child's mind gets a clearer idea of the number of these units with these (sensorial) objects in relation to whether the child does so with a minimum mental effort. While teaching arithmetic with this accumulation of units or with these (sensorial) objects let us see the time it will take. Which takes how much time or which takes the greater length of time – by means of the units or by means of the (sensorial) objects? While the child

SAN FRANCISCO (PPIE)

works with the units he does an exercise without any love for it. He does not only show that effort which a teacher eventually would hope to have him show, but we see that if a great pleasure, a really passionate joy for the (sensorial) exercise is shown, he repeats it spontaneously by himself, doing it many times.

Now, the psychological fact of this prolonged spontaneous repetition shows that the child is not tiring himself. This experimental fact has really solved a pedagogical problem. It is no longer a question of opinion where one could profoundly say 'I believe it is better to teach with the units' or another would say 'I believe it is better to teach with the sensorial objects'. When it is put upon an experimental basis, it is the psychic reaction of the child which convinces us that the sensorial object method is better. The method which calls forth more work with less strain is better because it results in an economy of forces and this is the objective point of all the problems of education because it is one of the natural objects of life - that of obtaining the maximum fruit with the minimum effort. This is so much a law of life that I call it the law of minimum effort. So, no matter how repugnant arithmetic may be, the sensorial object method is the most natural way of teaching arithmetic.

You will now see another phenomenon of the child learning arithmetic. If we enter into the experimental field, the psychological field and the natural field, then we must also use a separate or special language. We will not say how the teacher can teach these numbers but we want to observe the phenomenon of the child absorbing the idea of the quantity of number. In a regular school, for instance, where the teacher instructs or teaches, you would see the teacher teach the different numbers. Then the teacher would point out the numbers on the board. The teacher would do a great deal of work and then would wonder whether the child had learned, saying, 'How many of these?' 'What number is this?'

Our method puts a child in rapport with (sensorial) objects. These objects are put at his disposition completely, in such a way that he can use them not only for what he knows, but also to create new things. It is a very different thing to know something and to maintain an idea. The difference, for instance,

CALIFORNIA LECTURES

between a cultured person and a scientist is that the cultured person knows many things and knows them well. The scientist, however, must have studied by being a cultured person and then, in addition to this culture, he has been capable of becoming a scientist. He is evidently a person who thinks for a long time about objects, but the person who thinks for a long time desires to know more because something is happening within himself. In fact, he gains a certain inner maturity which can lead him to make a discovery of new things.

This work of maturity can never begin with ignorance. Knowledge must first be there, a clear knowledge. This is nothing but a necessary beginning of a further development. Take as an example those who meditate. The monk meditates in the morning. The thing upon which he meditates should certainly be known to him and is known to him far better than anyone else knows it. He certainly is not studying it. He does not remain there because he knows it, like a lazy pupil whom the teacher has forced to stay there and study until he knows his lesson. This meditation is not the application of one who must learn something, but it is the separate and characteristic application of one who has learned a thing well.

The monk who meditates upon a certain verse is maturing something within himself and *that* is his purpose. That is what gives a monk a profound knowledge of sacred verses, much more profound than the knowledge which we have of them. Now, this fact exists because it is a *real* fact. This same fact is true of the modern experimental scientist on the one hand and of the monk on the other. This meditation process which goes beyond simple knowledge can be applied to the methods of education.

I do not say literally that the child meditates on these pieces of wood but one could say that he is accomplishing a work which goes beyond simple learning and which, up to the present, he has not entered into (by) regular methods of education. (Teachers) cannot give this fact of inner maturity to the child. Teachers can help children in the acquisition of culture but this other work (meditation) must be done by the child himself, spontaneously, and not only that – it also changes in solitude, as it does for the scientist and the monk. I do not say that this solitude (of the child) must be the same kind as that of the scientist. Scientists need this isolation for the purpose of

SAN FRANCISCO (PPIE)

labor where there can be no disturbing element; monks go to the desert where they will have time for meditation. The child must do this work alone with the objects and not be interrupted by the teacher or his companions.

Old methods of education assume that the most important thing is that the child become cultured, and are concerned with how very long it takes to become cultured and by what means he becomes cultured. Our method makes the question of culture secondary in importance as representing the point of departure. The thing of great importance is that which leads to it, that is, the realization between, we might say, the child and the articles, or, if you wish, the spontaneous inner maturity of the child. That is the phenomenon which I spoke of in the beginning. This phenomenon occurs between the child and the object. We still see with surprise in these phenomena that the child will repeat these exercises many, many times. Old schools seek to have the exercises repeated many times so that the child will learn. The teacher will also repeat many times to be sure that the child is understanding what she says. But what a difference exists between the person who reads Dante over many times in order to become familiar with the language of the poem and the person who enjoys the poet, until he has learned his work by heart. How limited even this seems in comparison to the meditations of the monk, who meditates over and over again, morning after morning of his life until he is ninety or a hundred years old, even until he dies. A great difference exists between repeating in order to learn and repeating in order to become mature.

If we lead the child to the spontaneous action, we find that he repeats more times than the teacher would have dared to require of him. If we make our instructional priority culture, we find that the teacher is active; but with our instructional priority, the pupil is absolutely active. We give a precise and simple lesson which those who have followed the Course know and which we can repeat. The teacher first presents the (sensorial) objects in relation or in rapport with the numeric value which they represent. I say to the child, for example, 'This is one (1) and this is two (2)', showing the child, this is one (1) and this is two (2). Now I wish to verify if he has understood which is one (1) and which is two (2) and so I ask him in that way.

CALIFORNIA LECTURES

Then I wish to see whether he has understood well enough as to be able to make all clear. I wish to know whether I have in this simple way convinced him that the culture or knowledge relative to these two objects has remained with clearness without confusion, that is, so as not to confuse it with any other object. If I had first said to the child, for instance, 'Look, how many feet do you have?' A deficient child once said to me, 'One foot' because he lifted up his foot and saw only one, then he lifted up the other foot and saw only one. Of course, this would never have occurred with a normal child. But it also shows that it is not the clearest way of showing the idea. So, if the person were to say 'How many eyes have you and how many curtains are there?', and so forth, there would be the possibility of the child mixing up the number two with the curtains, the eyes and the feet. Suppose that the child had been completely (attentive) and some one said to him, 'What was the teacher talking to you about?' He might say 'Two feet' or say only 'About feet' and the next child might say only 'The eyes'. But our children should not say there had been anything else because I have verified it point by point. There was no distraction or confusion.

I am sure that culture exists and it is necessary for the purpose, (so), when I have completed this mission, my teaching is over. I might better say that (the teaching) is finished when I have reached up to ten (10). (But,) I also teach the symbols. I have those on cards where the sandpaper numbers are glued. I give the card to the child in the same way. I say it is one (1), having the child touch the sandpaper letter so he can write (1). Then I lay it down on the object it represents and at the same time I have the child look at and feel this cipher. When this is accomplished, I have taught him to read and to write the cipher. Here the teacher is not acting, she merely gathers as much as possible. So, if it is possible for her in this simple lesson to teach reading and writing at the same time, so much the better. You will see how clearly, quickly and easily the child will learn to put this in order, to place the numbers in order, to count and write the numbers.

The child learns to know how many times the unit is contained in the object and then arrives at the decimal or the number ten (10). Then, the question of saying, 'What do you do when you get to this point and how do you teach the number

SAN FRANCISCO (PPIE)

ten (10)?' is unnecessary. I do not find any difficulty in this nor have I up to the present. At this part of the development of the child, I tell him that this represents ten (10), just as I would tell him that the sign made of a circle and a stroke makes the letter 'a'. The mental work which would make it possible to understand that question or the difficulty of which you speak must come in their own time. It will come, but it is as simple now to say this is ten (10) as to say this is 'a'.

Some people ask, 'How should you teach the 'a'?' I simply say 'This is ten (10)' or, 'this is a'. If it remains a difficulty, such will remain to be resolved and we do not preoccupy ourselves with it. The activity will remain within the child and we must not see the difficulties in the child, but simply those that will remain in our mind. When we put the ciphers in order, I begin with the zero (0), that is before 1 to 9, but generally they teach 1 to 9 and then zero (0). It is generally taught this way, beginning with the one (1) and ending with zero (0). I think that it must be the same way here in America because I have seen my material put out and no matter how much I say it must begin with zero (0), it is always started with 'one' (1). Whereas it really is logical to begin with nothing (0) because numbers begin with nothing (0), then we have one (1), and so forth. But it is a disillusionment to begin with (1) and get up to the height of nine (9) and then be precipitated back down to zero (0). So this is one (1) and zero (0), as if we were beginning with one (1). This is the teaching of culture. After this we leave the child free and we see what happens. It is an experiment.

We will have two or three kinds of lessons. In one of these, I show the didactic material and the way of presenting it. That represents the technical part. In another lesson, I give the theory and a description of the psychic manifestations of the child. That is the result of work with the child. These are the two kinds of lessons. When I said there was a third kind of lesson, it really consists in practical lessons and means that I present all of these (sensorial materials) practically. However, before dividing these kinds of lessons, we must let the first two weeks pass. At present, there is nothing but a foreword until the next lesson.

A 'type out' occurs here, apparently 'child is', so this transcription omits it as irrelevant.

CALIFORNIA LECTURES

The biological development of the child

Lecture 5: 12 August 1915

If the teacher should be essentially an observer in this method, it is good to initiate her to observe instead of initiating her to teach. She should not only be an observer of what one might call the fruit of her work. That is, the teacher should not only see the teaching aim but she should be an observer of the whole child. In this observation, the teacher should acquire a certain conviction and faith that the child grows by itself. It is good that the teacher should observe the whole child (including) the physical part, the body of the child. For this reason, the teacher is given a kind of guide, for instance, the kind of book which contains a classification of guides or indexes, showing what is to be done. The teacher does not simply observe, but has a guide to help her observe, and it is in forming the habit of observing that she begins to form a definite concept or idea of the teacher because the principle which one must apply, which is different from that which is held by the old-fashioned teachers, is this: the child is transforming. (So,) we must be intelligent enough to observe him and also to help him in this transformation. The most evident fact is that which concerns the transformation of the child's body.

The child's body is smaller than ours. The stature is shorter. The difference between the child and us is not that the child is smaller, but rather that the child is different in all his proportions. If, for instance, we took the proportions between a smaller child and an adult and made them of the same height, one would have a man with a head that came to about the center of the chest, and disproportionately large. The waist line would be about at the man's knee. They would be wrong regarding the proportions between the long waist and the short legs, that is, the size would be proportionately different. (We) could imagine a tremendously stout man with a very developed, large head and short legs walking beside us if we thought of the child in that light. This person, with the short legs which must carry such a heavy body, has not got the small legs which we have. The bones are not formed yet, so that

SAN FRANCISCO (PPIE)

Those legs are not strong enough to carry the heavy weight of this large body. They are weak.

The child in his growth must become like us and so if his head is so large, the head is the part which must grow the least. The legs being so short are the part that must grow the most. The legs of this child have a great work to perform, not simply the work of walking, such as our legs have. The principal¹ work that the child's limbs have to do is to grow; (their job is not just) that of carrying the body. Let us imagine that we have all these children before us - children whom we must direct. What we have to do is not to insist that the child's legs do just the same (work) as ours, but instead we must put ourselves in an attitude of watchfulness and see the child do as nature would have him do with the different parts of his body. We would see that the difference between the child and us is that, instead of liking to sit quietly and composedly as we do, he prefers rather to stretch himself out on the ground. He works more willingly on the floor than sitting on a chair. He is inclined naturally to take a position of rest where he can stretch his body prone on the ground or floor.

We have the habit of correcting children who throw themselves on the ground and try to teach them to sit quietly and composedly as we do. It seems as though this fact of correcting the child and teaching him to sit quietly in school or at home is a part of education because he must learn to sit as others have always sat. We will see that when the proportions of the child's body have changed, (then) he will no longer need to stretch himself out on the floor and he will willingly sit as others do.

There are attitudes characteristic of a certain age which disappear with that age because they are no longer necessary. As the child grows, he transforms or changes in this way. Proportionately his legs grow longer and his waist becomes shorter. When these proportions, reciprocal parts of the stature larger than the person of the child, become more slender and he is less stout than at first, then we observe growth. Now, we all know, because this is generally known, that the child in order to grow correctly must grow in weight and that in the weight of the child we have a certain index as to his health. This should not be taken to mean that the more the

CALIFORNIA LECTURES

child grows the more rotund he should become. He grows in weight, it is true, but relative to the growth of the body his weight diminishes and so the person sees that the child gains relatively less than he had at first. (That person) should not be worried because this is normal.

One often hears a person say, 'My child was so fat at first, now he is becoming thinner'. This is quite normal. It is not sufficient just to observe the child in this exterior way. These few things that I have said now, (namely), that the child should gain more at first and then change in proportion to height, are not sufficient to know. One (also) must know how to observe with much greater exactness in order to take (on) a maternal mission, to be the protectress of (this) new humanity. To a certain extent, we must arm ourselves with a sure means of being able to follow this new humanity developing before us. So, instead of knowing generally that the stature grows, we must know how to measure it. And instead of knowing only approximately that the legs grow more and the body grows less, we must know how to measure this growth. We must know how to measure the torso and know how to put it into relation with the whole growth. Instead of knowing just how the weight changes, we must know how to measure it. In knowing this we learn how to put it into relation with the stature, to see the change. Then one can call this observing scientifically, that is, in such a way as to be able to use this knowledge in a useful manner. (A useful manner) means really to be the custodian of these lives which have been put in our care and this is said as much to teachers as to mothers.

If we limited ourselves when measuring, we could not have a precise idea of whether the child were growing well or badly. But these are the average measurements with which we can compare those of the child. Then we can have before us the positive guide as to whether the child is growing well or not. What all should learn is to take these measurements with exactness. (If we) follow this development (of the child), a few measurements are sufficient. These are the practical things.

Now you will see that to observe how the child grows is not the same as to make him grow. It is not while the child is growing that we mold² him in this way. He grows by himself and the changes occur by themselves. You can think that something

SAN FRANCISCO (PPIE)

similar changes with the psychic life. It grows and transforms itself by its own accord. We can put ourselves in a position to observe the psychic transformation just as we observe the physical transformation. Now you will see the body just by itself, but not independent of the environment because the child must nourish itself. All the statistics and researches of the anthropologist show that the child's stature and growth is in direct relation to his nourishment. So, in a certain way, we can help the child to make those changes by nourishing him well. (To nourish him well) is fundamental. Also, leaving him alone to stretch himself out and to run in the open air, and so forth (is fundamental). The thing is not to restrict him with his clothes, such as tight shoes, corsets, (and other) things which prevent the child from moving easily.³

We must allow (the child) the greatest possible liberty, clothes, coat and so forth. In doing this, we will see a difference in the growth of the child. The child is helped and improved by liberty, care and nourishment and (by) allowing him to grow freely in every way. (This is) so much so that if we compare a child who has proper freedom, you will see an absolute difference in thought and intelligence (when compared) to the child who has not been nourished well. You will note that he has grown more and that the proportions of his body are more nearly perfect. So the child not only is much larger, but he is really more beautiful. His nose and cheeks and all the parts of his body have really found the way to perfect themselves and to grow more perfect right along.

In giving the child care, nourishment and the liberty to grow, we are not only giving him the chance to grow but we are also giving him greater beauty. We can consider ourselves creators of beauty, as though we really were sculptors or modelers. Yet, we do not really do more than respect nature in all of its laws because it is that same nature which creates and makes people beautiful. It is not we who do it. (Now, consider) the psychic life (of the child).

When we say that the child increases and grows by means of himself in the psychic life, we do not mean by this that we should abandon the child to himself. (Just) as when we speak of leaving the child free in the physical life, we do not mean that we turn the child loose in the street to earn his own living

CALIFORNIA LECTURES

or to take care of himself as best he may. The only thing we must do is to prepare nourishment (for the child's intelligence), the same as we do for the body and then leave the child free to move himself in the psychic life as he wishes. But the nourishment must be precise, the exact amount and quantity, in order to make the child beautiful.

It is necessary that parents and teachers study exactly the proportions of the body and these elements which are in the body, so that they can find out these things. So psychic nourishment also should be scientifically prepared. These are the principles (for their preparation). We must study carefully and find out what is the correct nourishment necessary for the body of the child and in what way one can understand his physical liberty and in the same way the psychic life. Then we may observe, and observe with precision. I have said, for example, (in the case of) the body, that one should measure (its growth scientifically) and this pertains also to the psychic life. We must do something precise.

Now let us stop and study the precise way to take the principles of measurement of the body. [*Demonstration by Montessori with the measuring instrument.*] This poor instrument has traveled from Europe, not always well cared for, so we cannot expect to have it measure perfectly or (be) as precise as it should be. To measure height a very simple instrument is sufficient. A horizontal plane and a rectangular plane which form right angles is the scale of measure. The person puts himself⁴ against this scale and then one sees the height. Now you see any corner of the room can be used or an instrument in the home or a corner of the home can serve the same way as long as one attaches to this part of the wall a tape measure. One precaution which we must take, naturally, is to remove the shoes. The children in our schools learn to dress and undress themselves and so they assume that they must take off their shoes and this saves us a great deal of trouble and also provides amusement for the children.

There is also a normal position to give the true height because we would not get the true height if (the child) did not stand straight. The position must be very accurate. If we simply tell the child to stand straight, he will bend back in one way and be crooked in another way. If, for instance, one simply tells the child

SAN FRANCISCO (PPIE)

to hold the head straight, he may tip the head about, far back so the head becomes crooked. One must know how the child is standing. As these children are trained to control their own movements, it is sufficient that they once know this position. You will see that all of the children will take this position accurately on the instrument for measuring. The child must have the heels together touching the rod and then the whole body must be touching. The head must be put in such a way that the most prominent point in the back is that part which touches the vertical rod. In this position, the child looks horizontal. Try to put yourself in that position and you will see that it is the position which involves the most beautiful poise of dignity.

When you are animated by some feeling, your head is in that position at that moment. When you are tired or you let yourself go, your head droops a little to one side and forward. When you want to give yourself dignity, your head goes a little too far back, but knowing this position you can give an artificial dignity which is artistic. Little children who begin to know this position grow well and also aesthetically.

Think, for instance, of the positions of greeting which were used in olden times in the schools. It used to be the thing to make bows, to stand up and clap the hands. But now they do this in many of the schools in Rome to give this position of greeting, so that those who visit can have joy because it shows the most perfect body and this is the greatest homage that can be offered. Now you see this child is standing in the most perfect position for measurement. Then she bends down and gets out so as not to disturb this (instrument) in any way, so that one obtains the exact measurement. Very soon the child learns to do this of his own accord and puts himself in position and then learns to bend and step out again, reading the figure to show his own height. The child is perfectly capable of putting himself in position or in his right place and this becomes one of the most interesting things for the children. There is nothing more educational than to have the child make its own transformation. This does not mean to say that we are educating the child to become vain. In olden times, for instance, one taught the children to make themselves attractive and how to look, (as well as to do other things). (But,) it is a different thing to teach⁵ them to study their own nature rather than their own artificiality.

CALIFORNIA LECTURES

With this other part of the instrument, one measures the torso. In order to measure the torso, we will take the same precautions that were necessary in measuring the stature. Instead of the shoes, it is necessary to see that there are not too many impediments in the way of clothes. The child should sit far back on the seat and also for this the seat should be of a certain height so that the child can sit normally. This seat is very good for this child. The head is at first very straight, then one reads (the measurement). Where the seat is begins at zero (0). Now the figures which I use are not the same as those which you use.

This child has the stature 121. She should be seven years old according to the measurement. It is very different from the measurements of the little child of three years, and yet this child is not thin or ill-nourished. Yet, (each) should be weighed in order to have the exact measurements.

It is most important to see the relation between the total stature and the torso because it is this representative part which shows one in a moment the point of transformation at which the child is, that is, which step or proportion the child's body has reached. In order to find this out, I bring the largest number to 100. It interests me to know, if the whole weight were 100, what relation to 100 would the height be? So I make the proportions in this way: 'If this large one were 100, how much would the small one be?' That is, 121 is to 100 what 60 is to x . This way of calculating between the two measurements one calls seeking the index, the index of stature. This result of 100 between two measures is called the index of stature or, in general, just the index. This is the formula for finding any index: 100 times the minimum measurement divided by the maximum. In this case, for instance, the stature of the torso is smaller than the whole stature and so it is 100 times the stature of the torso divided by the height. This is the general formula for the index: one hundred times the minimum measure divided by the maximum measure.

If you will just learn this simple thing, it will help you remember. We will take up further measurements another time.

1. The secretary typed 'principle'; however, clearly the word should be 'principal' or main, most important.

SAN FRANCISCO (PPIE)

3. The secretary typed 'mould'; however, clearly the word should be 'mold'.
4. Here again Montessori shows herself to be advanced beyond her time.
5. Today's medical establishment emphasizes the need for both physical exercise and proper nourishment, so the American Head Start program incorporates both into its federally subsidized child care program. Of course, a fundamental difference is that Montessori's program included not only garden space where the children grew their food, but appropriate kitchen facilities where the children did limited food preparation and then served themselves the food.
6. The secretary typed 'themselves'; but the meaning is clearly 'himself'.
7. The secretary typed 'lean'; however, the text clearly means 'teach'.

CALIFORNIA LECTURES

The psychic development of the child parallels the physical

Lecture 6: 13 August 1915

We said yesterday that when we observe the school, we should observe the entire child, the whole child, therefore also the physical part of the child. The physical part like the psychic changes before our eyes while we observe.

This instrument, which seems like a veteran of war, we use to take two measures. The two give ideas of change. Inasmuch as the child not only grows but transforms or changes in the reciprocal relation of parts. There is a change between stature and legs, and so in this way as children not only grow but change proportionately in beauty, we take the relation of the two, noting the general form of the index.

Another measure of importance is the measure of weight, an index of healthy growth because it is the only measure that increases or decreases. Stature cannot decrease and increase again. It is not possible that a child can increase in height and then decrease again because of illness or ill-nourishment. This cannot occur, but the child *can* diminish in weight if sick. We really have a scale accurately designed to measure health. It is very desirable to find in psychic life a measure which would equal this in precision.

We take the relationship between the two heights, noting generally the form of index given by this relationship: 100 times the small measure divided by the larger or greater measure. This is a precise way of observing the body as regards the height or stature. You will note that all anthropologies are in accord as to noting statistics. That is, all arithmetics agree about the statistics, that the growth of the stature is in exact relationship with the character of the nourishment of the child, so that if¹ we give the child greater nourishment, care and physical liberty in which to grow, we have done all that is possible for the physical health of the child.

I have called your attention to the fact that we can do just about the same thing in regard to psychic growth. In psychic life, too, we cannot do much more than what we do to help the physical growth. That is, we must give the adapted nourishment and

SAN FRANCISCO (PPIE)

liberty. Of course, one understands psychic nourishment and liberty, and then we must observe in order to see the psychic change.

Now we will continue to observe the physical side. Besides the two statures which represent the fundamental measurements, another measurement universally known to be very important in the growth of the child is the weight. One might call it the index of healthy growth and it is a real help for the one who judges because it is the only measurement which can increase or decrease, as I stated before.

When the child is individually under the influence of joy and serenity, we are sure that his psychic growth is going well. Now, this joy is seen more clearly than the weight, although in weight we have instruments to measure, namely, the scale. It would be very convenient if there were in schools such scales as one sees in railway stations and other public places, because children can very easily take their own weight. As you have seen, they measure their own height. You notice the precautions which we take when measuring the height. We had the shoes removed so that they would not add anything to the height of the body. The body had to be placed in a certain position against the measuring rod so that the height would not appear any shorter than before.

We must also take analogous precautions in order to have the exact weight of the body. We should not weigh the child with his clothes on. You know that a very practical way is to weigh the child first and then afterwards weigh the clothes. All the children should know how to weigh themselves. A good time for this is when the child is taking his shower bath. It is also not advisable to weigh the child immediately after eating, but after he has had time to digest his food because it could make quite a difference in the weight. I have charts or sheets here in the biological chart where the dates can be noted for the taking of the measurements. The stature or the height should be different from one month to the other and the weight varies every week. In order to make the taking of these measurements in the schools more practical (so that they will really be taken), I advise dividing the children according to the months in which they were born and measuring them in that month and on the day they were born. For instance, those

CALIFORNIA LECTURES

born in January measure in January, and so forth. This advice is not a dogma; it is nevertheless very clear to put into practice.

You will find out in a school that when one child takes off his shoes to measure himself, all the children will take off their shoes, waiting to be measured; then they will stand around on the floor patiently awaiting their turn and be much disappointed if they are not measured. This measuring of themselves becomes of great interest to the children and they do it intelligently. It is very interesting to take the weight of the children often because, as I said, it is a real index to their health and it is also very important from the point of view of health for each child. It has now been established with precision that children who are in a period of incubation or in the period before contagion in relation to disease very noticeably lose weight daily, say at the rate of 50 grams per day. So they diminish in weight, which not only means a lack of nourishment, but possibly an attack by some disease. One may see these phenomena particularly in our schools. For example, when we notice that the child no longer has good concentration and can no longer apply himself, and also that his happiness disappears without any apparent reason, it may be that the weight will explain (these phenomena). Many times when a child is ready to come down with some disease he will show these two symptoms which tend to accompany each other: diminished weight and psychic changes. That is why one research helps another and why psychic observation is not complete without physical observation.

What is of great interest is the relationship between stature and weight, because there are characteristics of a certain age in this. The relationship is different according to the age of the child. As I said yesterday, the little child is much fatter and the child, as it grows older, becomes slenderer. Take for instance two people of the same height. They have different weights – one weighs more and the other less. This is an absolute difference in weight. There might be two people, one short and one tall, who relatively weigh the same amount. That is, they have the same relative proportions between the height and the weight. Finally, it cannot be the weight alone which gives the index of the size of the person,

SAN FRANCISCO (PPIE)

The relationship with height is the most valuable thing. This, like the other relationship, is called the *index*, and therefore what is of interest is the index of the weight, not the weight alone. I will not go into a long explanation because you can well learn these things.

In the place of the smallest stature, we will put the weight and in the place of the largest weight we will put the stature, and yet you know that it is impossible to make calculations between measures of volume and linear values. So we must take the cube root of the number which refers to the weight. The child could not do it. This is a relationship of such great importance in the observation of the child that all possible calculations made on the combination from birth up to complete development can therefore be found in (what) they call the tables of calculation, which are already done for us. It is really sufficient simply to take the stature of the child and the weight of the child and this the child can do for itself, reading the number which varies from 30 to 22. Children have the greatest index of weight at one year of age and then normally this gradually diminishes up to 10 years of age. You see that it is something opposite to the absolute weight and the relative weight as far as numbers are concerned. Whereas the absolute weight is always increasing, the relative weight is always diminishing and the little child who is very fat is just as healthy as the slender child who may be 8 years of age.

One might say that between these two opposite facts there is a balance because of which the weight may vacillate, increasing or diminishing and so we can see that it becomes difficult to see what stage of health has been reached. This fact of the diminishing of the relation of the weight applies also to the weight of the stature, because the torso is developing in relation to the length of the legs, as you remember. Because of these changes, there is also a change in the measure of the chest or thorax. The thorax actually increases with the age of growth. It is natural that an adult has a larger chest than a very small child; but relative to the rest of the body, the child just born has the largest chest measurement in relation to the body. Little by little, as the proportions of the body change, taking the form of the adult, the circumference

CALIFORNIA LECTURES

of the thorax diminishes in relation to the stature, until, in the adult, the circumference of the thorax is about one-half of the stature, whereas in the little child it should always be more than one-half of the stature. Instead of being 50% of the stature, it is 60% of the stature of a little child. You know how important the increase or growth of the thorax is to the child's growth, because it is in breathing that the chest expands. There is no doubt that as the stature is related to nourishment, the thorax is related to the oxygen intake. Whereas students at university, who generally are the most well nourished, have the greatest stature, they have the most restricted thorax of all because they are those who are breathing least freely.

The peasants in the mountains or the country, who are generally the poorest because they have difficulty in cultivating the ground in mountainous country, have, therefore, less good nourishment and the smallest stature, but the largest chest expansion. It is much more important to have good chest development than large stature. When a person has become an adult and he will no longer grow, it is impossible to make the thorax expand, and so it is necessary that the chest should expand while the bones are still flexible or forming. We can properly prepare the good thorax of the adult only in childhood. He who has lost his good chest in youth, one can say, has lost it forever. We all know that a compressed chest where the bone structure is not well developed is very dangerous and leads to the weakness which breeds tuberculosis, consequently the question of the school is a question of life. You know how in the history of the school there is the history of this drama, in which humanity was being sacrificed because the children were being shut in schools, not being allowed to breathe the fresh air and they were also very stooped or bent from writing, to such an extent as to bend their spinal columns. They were very poorly nourished, because if the family did not consider their nourishment, nobody else did. It is because of this fact that the great reform of the schools has come about.

That school where the child is given nourishment and where he can run about is the school in which we see no crooked backs and no symptoms of tuberculosis. All of this is nothing

SAN FRANCISCO (PPIE)

but the care of the body. Yet, in these schools where they can get school meals and have space in which to move about, only the problem of the body has been solved. They are not schools where freedom is given to the inner life. They are schools where liberty has been given to the body to grow. In a certain way, if we wanted to have a school for little ones we would have to do the same thing: to nourish them well, allow them to run about in the fresh air and to breathe easily. There is no difference. It is true that, first of all, one must give liberty to the body because of what the poor, underfed body should do; it is incapable of doing anything. But this is only the first chapter of the history of liberation and it is along this path that we must continue. It is along this path that one must continue to observe the development of the whole child.

This psychic part is a most important part. This is an even more important part in the development of the body, and how can we think that the body of man belonging to so complex a life is satisfied with oxygen and nourishment? I am speaking solely of the body. Even the body of the man, if it be a more complex being, must need something positive. In fact, I can give worthy statistics gathered in Italy and Spain, that where psychic liberty was given it has been useful to the physical health of the body. It is enough to know my little children of San Lorenzo. These children were very poor and I had expected as a doctor to treat them physically, but on account of some circumstances I was unable to do it. The children flourished in health just the same, and children who were suffering from nervous troubles and were terrified at night but were excited were cured. All of this is not a mystery for physiology, because we know that when the nourishment taken and the oxygen taken from what is contained in the body is not used (the person is sick). (But), it is when we take oxygen in our tissues that we are really using it and this fact of the utilization of the tissues is greatly influenced by the nervous system.

For example, it is well known that when we are very much disturbed our blood does not circulate well. For this reason, great suffering has special symptoms: for example, the pallor of the face because the blood is not flowing well; an impression of having lost weight from one moment to another because we have lost blood; the mouth parched because the glands have

CALIFORNIA LECTURES

not sufficient blood to give the saliva; one has no appetite because the stomach does not work normally and because of that we become thin. There is a sort of contraction of the blood vessels in any kind of suffering, and also in boredom or vexation. For instance, people who are listening to a discourse may become bored and this is bad for their health. Vexation can become so great that it is like a paralysis of the heart. In fact, one knows of people who have fainted because of it, but then there are providential ways which Nature has of overcoming this. One is sleep and the other is the yawn which is like waking up the heart and making it work. Because of this, you see that vexation does not kill, as great sorrow would do, but if there were no sleep and no yawn, there would be more pain and people (could) not bear it.

School children who must hear annoying discourses not for an hour twice a week but for five or six hours every day from the same person really must rebel and save themselves by this rebellion or be buried. (So,) what we call a lack of discipline in school is really the means of salvation. The child is really saving himself. (This lack of discipline) is the salvation of the body and the blood flows more easily. Then people have a better color and the eyes are more brilliant and in those moments of pleasure or happiness the intellect is more awake. It is possible to understand something better when we are happy and contented. When we are suffering or annoyed, we say 'I cannot understand anything'. You see a very fine dinner before you and have an annoying person sitting opposite you. The meal is not well digested. Whereas a coarse meal with a sympathetic person is much more nourishing. It could be compared to a meal where the air was poisonous and (the taking of) a meal in the fresh air.²

You will see that there is a parallel also in the psychic life, not only in the physical body. One might take the very well-known phrase that 'Man does not live by bread alone' as really speaking of the physical life. (But,) good conditions, (food) and good air are not sufficient. You will see, for instance, countries such as Italy where punishment by death has been abolished and criminals are condemned to stay in the cell known as solitary confinement where they have no other trouble except that they have no psychic nourishment. They

SAN FRANCISCO (PPIE)

have a room, a little space where they can take fresh air, large enough so that they can walk, only this space is enclosed with high walls. In the cell, there is something similar for the body on which to sleep. Articles of hygiene and food are passed into the cell, even to those condemned to death. All must live hygienically, even children.

(But,) it is psychic hygiene that is lacking because everybody now has physical hygiene, even those condemned to prison. So one might say that these condemned ones even in Italy have the best conditions for the body. They are taken care of. They have a place to sleep and a place to exercise and a place to eat in – nothing to worry about. Many workmen, when they are oppressed with work, have thought 'Oh, how happy I would be to be in that place, have a good, peaceful rest in a place where I would have nothing to think about. Have a small room of my very own and a little place to exercise all of my very own, and food brought to me as tho' from Paradise'. This is the life of the one who is condemned to solitary confinement. This man has no communication with others. He hears no words and, therefore, he hears no music – nothing. He never sees anybody, not even his warden because his food is passed into him through a grating, in silence. He has no papers, books, (nothing else). He stays there 8 or 10 years. One might say that he is resting well. One might say that it is an ideal form of absolute rest.

These men, who are really of a low, brutal type, have no mental aspirations; they are simple. Deprived of psychic nourishment, little by little (they) lose weight and are consumed as though they had tuberculosis. They die without any reason. So much so that solitary confinement cannot last longer than 10 years. Because they are always all dead by that time, this solitary confinement is considered the greatest form of cruelty. (Even) the judges assert that it would be far better and less cruel to have the penalty of death conferred where it means the death of the body rather than the prolonged penalty of the eventual death of the body and mind. But they do not have the penalty of physical death in Italy; they have the penalty of psychic death. Men die just the same; it is only a question of time. Therefore, man does not live by nourishment or oxygen alone, and we can say so much more of the child, who must grow. If we consider the hygiene of the growing child, we

CALIFORNIA LECTURES

cannot possibly stop at this first step (of physical liberty). Not only this, but we must also think that for the body alone (they do not need just) nourishment, but in order to grow they need something more besides simply nourishment and air. That is why, in order to have these very beautiful schools, we should consider the liberation of the body as not solving the problem of liberty.

The mothers, also, who think that they have done everything in order that this body should grow correctly have done only a small part. They have not done the greatest part.

1. The typed copy of the text has 'is'; however, the context requires 'if'. Since many 'typos' exist, particularly in this speech redaction, I am satisfied, as editor, as to the accuracy of the change due to the context.

2. Again, these typed lectures seldom provide paragraphs where a change in or a new thought occur, thus resulting in paragraphs of great length and some confusion. Here is such a case, so the editor placed a paragraph break.

SAN FRANCISCO (PPIE)

Understanding the physical aids us in the child's psychic development¹

Lecture 7: 14 August 1915

One can also take measurements of the child's height, but this is not as important as the measuring of the child's body. Whereas the stature and the weight are of physiological importance, the important thing, one might say, is to find out scientifically the measurements for studying the head. That is why I put in my biological chart measures that not only can be taken once a year, but which might be left out or left to the doctor. I have special tables for physiological investigations; taking measurements every month and the weight every week could not very well be left to the doctor. In the first place, the doctor could not always be at the school, and the children can learn to do it themselves, which is itself of educational value.

I have here an instrument for measuring the length and breadth of the head. Naturally, I could not measure the length of the head with a tape measure, for I would take (only) the curve. Neither could I put a rod through the head. The instrument consists of the rod, which measures, but which is not actual. This (instrument) registers on the small scale the measurement of the larger part, that is, a reduction made in the scale so that it measures the top. It is a very precise instrument. It is necessary to know how to take the measurement so as to be sure to get the length of the head. For this reason, one must know exactly where to put the instrument. The anterior point to put the instrument is the central point on a line parallel to the eyebrows, really the *central point between the eyebrows*. Always use the instrument with the figures near the end so as to handle the instrument correctly. Try to find the most prominent point on the other side of the head and be sure that is the most prominent point. I move it up and down to prove this. An assistant closes the instrument and reads the register. You see it is not very practical in schools, but one takes it only once a year and it is very interesting to follow the growth of the head.

The greatest difference between the normal and the deficient child is in the head size. Then one takes a transverse

CALIFORNIA LECTURES

measure. In order to take this, one should put the head in the normal position, put the instrument in a horizontal plane, and seek by trial and error to find the largest point. One can read on the instrument the widest part. These exercises must be done with great precision. You might think the children would be terrified at seeing these instruments so close to their heads. This generally happens in the clinics, but our children are so much interested in investigating this that once they see these measurements being taken they all gather around and say 'Oh, do it to me too'.

The circumference of the chest, of which I spoke yesterday, one can take with a measure like a tape measure. With these special measures (of the head), one uses metal measures because they do not change or stretch. One takes the measure of the thorax horizontally when the child is standing in a normal position and at the level of the breast. This also is not a very practical measure to take, but it too is taken only once a year. In order to make the measurement of the chest more practical, many people now take two sections, naturally when the patient is undressed, not when they have their clothes on. The measure of the thorax can reveal a great deal. Many children who are apparently robust have a chest which is not sufficiently developed. (These) children, therefore, have a great need of living in the open air, and no matter how annoying the taking of these measurements may be, if it is rigorously taken at least once a year, it may save the life of the child or help its health very valuably [*sic*].

Those children whose chests are insufficiently developed are generally good children because, as you know, oxygen gives a great deal of life. You know that in putting birds in an enclosure where there is not much air, they are very sluggish and if one pumps in oxygen they become very agitated and jump about. The children who do not get a sufficient amount of oxygen are apt to be very calm and quiet. In the history of the school, there is this fact, that the children who are very good and studious are found to have a diminished chest expansion. In the past, it was really this fact that teachers sometimes encouraged by praising or awarding prizes. The destruction of the child's health (resulted) because these children who were quiet and good and studious were praised and awarded prizes

SAN FRANCISCO (PPIE)

and so they became more studious and would work in school and also at home in order to get greater praise. They would strive to do more reading and writing and would constantly be harming their health.

A large percentage of these children, then, who were considered good and who received prizes would die of tuberculosis when they reached high school. One measurement of the thorax, which may seem a trouble, may be the greatest help in saving a life. Taken once a year, it is really a simple sacrifice to make. This one measurement has shed great light and it also serves to give us a more complex idea of the development of the organism. We are better able to judge the manifestations of our children when we know from the very beginning of the scholastic year which are the children who have the normal measurements and which are the children who, on the contrary, have chest measurements which are too small, or who have not sufficient weight, or who have not grown sufficiently.

We compare them with those who have all the normal measurements and see how differently they act in their psychic reaction or manifestation. We have a greater understanding of those psychic manifestations which we must interpret and observe just as we have a greater understanding of the physical. Our physical understanding helps us in our observation of the psychic (development of the child). Our greatest mistake is that we consider only one side of life. Some are occupied only with (the development) of the body, such as correct eating and general nourishment, breathing exercises, and so forth. They understand life almost only from this standpoint. Generally a person who attaches himself to one side of life considers himself separated from the other side. For instance, there are students or people who think only of studying what entirely affects the body, and then (the children) grow miserable with narrow chests, (and other problems). They also neglect other parts of life such as the affections, the relations with other men and the spiritual side. Again, there are those who think only of the scientific side and the spiritual side and look down upon those who either study a great deal or develop the body and then they become like people battling against each other. These are partisans of the body, partisans of the intellect and of the spiritual side of life.

CALIFORNIA LECTURES

The partisan of the body enjoys life from the category of society; and then there are students who disdain all others who give too much attention to the body and those who do not think of things beyond life. Then there are the spiritual ones who become priests and monks and who like to look down upon the body and think only of the life beyond. It is as though American people should argue about the fifty-cent piece and one group would say 'It has a head on it' and the other would say 'It has an eagle on it'. One would say, 'I have the proof' and the other would say the same. But the coins are made so that there is a head on one side and an eagle on the other. Both are in the right but both are wrong in looking at one side only. So (our) study should be as complete as this and also the help of life should be as complete as possible. There is also a concept of liberty in this, namely, not to be a partisan of one party or side.²

Another point which we must make, and which is very interesting to get an idea of, is the whole life of the child when he is not with us. For instance, the children whose development we are following are perhaps with us a few hours in the day and perhaps 10 months of the year and then we do not see them any longer, and we have not seen them before that. This cannot be called giving a general look at the life of the child. One cannot form a complete idea from this brief (student) contact. Also, our capabilities regarding directing the life of the child are detracted from in this way. Therefore, we should make the acquaintance of the child.

For example, when we present one person to another we do not take a man and just put him up before us; we do something more than this to introduce a person. We must know to what society and conditions he belongs. We must know that he is a moral person, otherwise we would not introduce him; and we would want to know what title he must be given. So the introduction takes in a very brief way the form of a history of the person. Otherwise, one could simply take any person from the street and say simply, 'This man is red or white or black'. And yet our acquaintance is very brief, if it consists only in shaking hands with a person, perhaps never seeing him again. When we are to have a much greater contact with the children, we must have also a more complete introduction, and for this we

SAN FRANCISCO (PPIE)

must know the history of the child as far as possible. This knowledge of the family of the child can be most easily attained if the school (is) situated in a tenement district, primarily because it is easier to approach the people of that class and also because in those tenement schools the teacher lives in the house amongst the people and can get to know them without becoming acquainted with them.

The course which I suggest for becoming acquainted with the family does not always have to be used. It is sometimes possible to find things out without giving direct counsel, as the family does not understand the purpose of this research. It would be necessary that the mothers should be educated in the same way as the teachers in order to understand how important it is that the teacher should know the life of the child in order to understand the child. Just as the teacher herself knows how important it is for her to know about the child's life. When the mothers come to understand that, for instance, then one has to restrain their confidence and so really both should be educated to the measure of the confidence which is the scientific measure. It is not just plain confidence; it is something different. These researches are useful both when the child shows some abnormality or when the child is not perfectly developed. If they are developed perfectly or normally, it is not as important to know these things. These charts which serve for the research of the child's life are also very useful to us. The things one learns in these researches are useful to all and they really should form part of the education of all. They give a really personal interest. I mean a peculiar interest for a mother or person who has a family. The few notes which I have here are really what it is absolutely necessary to know. There are three kinds of research: biological research, the social and the moral.

One really has (to have) an idea of the physical life of the child, of his social conditions, especially from an economic standpoint and also know in what moral environment he lives. In the biological research, I have put these points only: the age at which the parents married. This is a point of great importance because there is a preferred age range. Children who are born of parents within certain limits of age are apt to be the strongest, or geniuses. Generally, people of genius are born to

CALIFORNIA LECTURES

parents about 30 years of age and in order that this should occur they are generally born after other brothers and sisters. They are generally the fifth or sixth child. For instance, Victor Hugo was the ninth child. On the other hand, in precocious marriages the first child is apt to have the misfortune of premature death; between these two extremes is a gradation which can give an idea of the strength of the child.

It is also important in regard to the age of the parents to know whether the parents are about the *same* age because naturally when there is a great difference of age this (can be) unfortunate for the race. I have not mentioned those children whose parents are over age or too old; this is unfavorable to the life of the coming child. Another thing to find out is whether the parents of the child are related to each other because it is known that people who are too closely related do not have such robust children. This is not absolutely because the parents are related, but it is because there (might be) some defect in the constitution of the family and uniting two defects which are alike or similar accentuates it in the race, whereas in different families there could be different defects which could eliminate each other. Another thing to be noted are the diseases of parents. It is known that there are some diseases which are inherited. For instance, if the conditions at the time were such that the parents were convalescing from some illness or if they were straining too much in an athletic way, the children born at that time would be less strong. For instance, with the deficient children, we found that at the beginning the cause was too much bicycle riding. There are people who really become weakened and ill because of excessive sport. It is well known that alcohol has great effect upon the race and so also the diseases which involve poisoning, such as rheumatism, anemia, and others. You will note that there has arisen the science of eugenics which gives so many notes on all of these things that it really is becoming a science and to know these facts is very useful. (But,) they are useful only in a broad way.

It is a delusion to believe that by giving these lessons the race will become perfect and, although eugenics may seem like the salvation of humanity, I think it is a great delusion to think so because if eugenics could save the race by removing altruism from the whole world, it would be sufficient to put all the

SAN FRANCISCO (PPIE)

journals in the world in accord for one day. Work does not turn out this way and so much less eugenics, and thus, perhaps, it is even more useful to study it as a condition. Study the condition in order to understand this humanity, individually and personally. For instance, to find oneself face to face with an idiot child or, for instance, a child who suffers from tuberculosis of the bones and who is weak and to know clearly that this is caused by alcohol or because of some mistake of the parents. By observation we get a much stronger impression than merely by reading all the cases concerning it: to see a human being unfortunate to this extent and to realize that this might also attack us and that it could be avoided. It is a far greater force to be with these children than just to read about them. On the other hand, to see robust and happy children who are full of joy and to know their history which is poor and healthy guides us in the path of their health.

The greatest reward or punishment which can be given to us for a more or less virtuous life is the child who is more or less healthy. Now, research should be done also upon the life of the child itself. The child's life does not begin when it is born, and so we all consider ourselves older than we really are because we were all given life before we were born. During this time, the person not only existed but was existing in the most fragile epoch of its life (in the womb). All that we can do to improve the race should act in the first part of life because the more the person becomes organized the more impossible it is to change. This is understood. This fact is of great importance because it refers to the beginning of life. For instance, if a disease comes into the organism when it is being formed and this lasts for some time, then the organism is badly formed because of this illness (because) while the illness lasts the change was being made, and then one can say that there really is the sick transformation and the wrong development as a result. Whereas, a disease in a person already formed simply means the illness and then the cure.

To give an example which does not really conform but gives the idea: suppose, for instance, that we had some trouble in the knee so serious that it was necessary to remove a part of the bone, so that the regular movement of the leg was stiff; but if, for example, it happens to a child of 3 years of age, not only can

CALIFORNIA LECTURES

the child not bend the knee but the bone cannot grow any more and the child will have one leg shorter than the other. For an adult to have a paralyzed arm, it means that the arm remains in this condition; for the child who is born with a paralyzed arm, his arm remains short even as it was at birth. So when these accidents happen in the period of development the consequences are much greater in the sense that there is an arrest(ing) of the development or wrong development. So it is all the more serious in the early stages of development. For example, almost all idiots have had a disease before birth, a pre-natal illness. They are simply ill. They are generally people who have been sick before being born and so all the unfortunate conditions during this time are of immense importance in after-life. From this so many social questions arise which interest us particularly, not only for working women but for all. So, finally, one can study to be a mother useful to the race before the child is born. There are so many interesting points in relation to this which should really be a special study to all of you.

The psychic state also has an influence. There are also the facts noted in history in relation to this, and it is really a very easy thing to understand, for one knows that in moral suffering there are certain poisons formed in the blood when a person suffers mentally. These have an influence on the person. Naturally this also depends on the health and strength of the mother. One goes more deeply into all of these studies when one has children to study and the subject becomes intensely interesting. You have probably heard said many times that there should be education of the woman who is to become a mother and this study can be done very well by the teacher who has been with the child whom she is studying in all ways. She knows him mentally and so you will see (the same thing) in the study of medicine and nursing, which have become the style; (however,) all are not suited to nursing. Queens, and others, all started to study nursing in order to be trained nurses. They did not have this altruistic intention. It was in order to learn something useful to themselves and for their own families. They considered it a useful and necessary knowledge, as playing the piano used to be considered. Great progress is made by someone who considers it necessary to sing and play the piano or by one who considers it necessary to study nursing.

SAN FRANCISCO (PPIE)

Now if eugenics becomes the style, all women who become teachers of little children in order to find the real clinic will go to the schools instead of to the hospitals and it is a much more pleasant³ place and more instructive; nor does one exclude the other.

One thing of fundamental importance to find out is the point upon which we have all insisted from the moral standpoint. That is, if the child was fed by the mother or by another person or by artificial feeding. It was noted that children nursed by the mother are always healthier than other children. It is strange that this is true, even if the mother is ill, excluding certain illnesses as tuberculosis or anemia. But, for instance, women who are sick with malarial fever give a certain immunity to the children in nursing them. It is noted that children nursed by the mother have doubled their weight by the age of five months. After a year, they have tripled their weight. Children artificially fed have doubled their weight at the end of the year and tripled their weight at the end of the second year. Between these two extremes, there are all the differences in conditions, but it shows that the child nursed by the mother is healthier and it is also very important to know the conditions of the child's health in the first years of its life because diseases are of greater importance in these first years.

In the first year (of the child), life forms a part by itself. It is separate from everything else. The illnesses in the first year of life are of the greatest importance and you know that the greatest mortality occurs in the first year of the child's life. Yet it is also important to know what other illnesses the child has in the other years of his life, for example, if the child has exhausting illnesses, such as intestinal trouble. Naturally, the child who has suffered many illnesses is weaker. He is no longer strong. This you will naturally understand. I did not know whether you would understand. Are you convinced? The child who has had most illnesses is weaker. Are you convinced that if he has always been healthy, he is stronger? If he has had the best conditions before birth and after birth, (then) he is healthier and do you believe that in that way he also has greater resistance to the diseases afterward? None of you believes that the child who has suffered from intestinal troubles will be better able to resist typhoid in later life. You do not

CALIFORNIA LECTURES

know if you believe that the child who has had all these misfortunes – and this means an alcoholic mother and artificial nourishment and many diseases – will be able to resist microbes and germs in later life. Then why do you believe that in the psychic life, a life of happiness, calm and peace they will be weakened? The same thing must hold true.

And finally, we must know in what part of childhood the child makes its three great efforts: first, teething; (secondly), taking his first steps; and (finally), saying the first word. These are the three first fundamental principles of development. There the greater or lesser strength of the child manifests itself. You know that a child who is retarded in birth, the child who walks too late and the child who can talk only very late is weak, and so what do we do when we put the child in the best hygienic condition?

Imagine a eugenic mother married to a eugenic father and they eugenically have a child. What do these extraordinary parents do? They wait. They cannot do anything else. It is evident that they can do no more than this. Are you convinced of this? They wait until the teeth appear. They wait until the child is able to walk and they wait until the child speaks its first words. They dance about him when this happens. This is another question. They dance about the child with the same joy as those who are not eugenically married. They will feel great joy at one little tooth which has appeared. In fact, their joy is as great as the man who makes a million dollars. But what they could never do and accomplish is to take hold of the teeth of the child and make them come. They may delude themselves with the idea that they are helping the child to walk, but if they are eugenic parents, they will not have these delusions. They have this delusion because they know all the natural facts about the child and they know that the child cannot walk until his nervous system is ready and at a certain stage of development and the best way to develop this walking of the child is the eugenic way. To let the child step out, to allow him to sleep quietly and (to have) the mother feed him well, eugenically, (then) this is the best way in order to help the child walk as soon as possible. It does not matter if it seems to be just the opposite to that which would help walking because it seems natural that the child should be awake when

SAN FRANCISCO (PPIE)

walking. One must be on one's feet and yet the child is lying down. One must not be at a meal in order to walk but that does not matter when the child matures and is ready to walk. One lays him down upon the floor and one day he gets up and walks.

This is one of the most wonderful events in the eugenic family because one has left the child there on the rug and one does not see him — he is no longer there. He has walked off. One finds him walking across the room. As, for instance, when one lays a cocoon on the table and one day one finds that it (a butterfly) has flown away. These are the things of Nature. The prize is so much greater inasmuch as we have been great in desiring it. Yet, we are not really and never have been the creators. We have been virtuous. We have been observers of the law and nothing else. Then, when the child speaks, naturally in order that he should speak, we must have spoken. We do not mean that we should become dumb in order to help the child. We must not retire and withdraw for a reason of respect for Nature. For instance, we must not say 'Oh, I do not wish to influence the child with my speaking', and then be absolutely silent. We must speak as we always speak.

(But,) if the child has not gotten those nerves sufficiently developed, he cannot speak. It makes no difference whether we speak or not, he will not be able to speak. When he begins to speak, we are certain that he will not begin to give a discourse, although it is a great event in the family. But with this event one understands that the mechanism is preparing itself and then we can give him the means to help himself. As the child has this tremendous effort to make with this mechanism as a word enters and then is spoken, we will help him as much as possible. We must do all that we can to help him. You see today the most that we can do with this matter.

We must first understand what we must not do because otherwise we waste so much strength and in order to do all that we can, we must do with all our strength only that which we can. So, when the child is starting to go forth, we will help him as much as we can, seeking to analyze the sounds of the word so that it will be easy for the child to hear those sounds rather than to extract them from the speech of some person, so that he will hear them more clearly. We will do the work of

CALIFORNIA LECTURES

extracting this separate sound (and speak it carefully) so that he will hear it more clearly, and so that he will be helped in doing his great work of extracting and articulat(ing) language. Therefore, to know what we must do and what we must not do, we must study and (then) work only where we can help. Here is the basis of help for the child and not only for physical help but for psychic help.

Now we have no time to talk about the other questions but we hope to talk about these on another occasion.

1. This lecture shows Montessori's awareness of the learning ability of the fetus within the womb of the mother. A brief review of the teaching materials at the University of Rome Medical School shows no such inclusion within their 1890 instructional program. However, elsewhere within Montessori's various writings, she comments upon the *New Testament* scene wherein Mary, newly pregnant, meets Elizabeth, her cousin. St. Luke reports that Elizabeth is in her third month and quotes Elizabeth as giving a loud cry and saying: 'Of all women you are the most blessed, and blessed is the fruit of your womb. Why should I be honored with a visit from the mother of my Lord? For the moment your greeting reached my ears, the child in my womb leapt for joy' (*Luke, 1:39-45*). Thus, Montessori, the medical doctor, seems to have recognized the humanity and the learning ability of the unborn fetus within the womb both from the scripture and from her own observation as early as 1915, an observation which was certainly unique at that time in medical circles whether in Europe or the United States.
2. The secretary continues with this paragraph, but since a thought change occurs, I start a new paragraph.
3. The text has 'pleasanter'; however, I changed it to 'more pleasant'.

SAN FRANCISCO (PPIE)

Social conditions and the development of the child

Lecture 8: 19 August 1915

Continuing the study of the child, one must observe not only the present condition as one does in taking the measurements, but also the biological history of the child of which we spoke last time.

As the knowledge of the child is not only taken from that which is, but is also interpreted, the child shows the effect of cause and all his biological history helps us understand the causes of which we see the effect in him – good or bad effects, naturally. Not only biological facts have an effect on the child, but also social conditions and, therefore, in order to have a complete idea of the child, we must add to the biological researches also the social questions. We cannot think of the child without these causes unless we think of him as something abstract. The real child, the living child who is among us, we really see by his causes – all the causes which act upon him. This has been shown to us very clearly by the history of the scholar. When positive science began to penetrate into the school in order to study the child, it gave a great many revelations, especially as regards the social condition of the child. These things have been so widely spread that they are pretty well known to all, but because they are known that is no reason why we should overlook them.

It is known, for instance, that many children who were considered not to be good children and who were punished in school, were children from very sad social conditions. The opposite was also true, that many of the children who were from good conditions and were good children and were awarded prizes and praised in school were children who came from very good families. For instance, statistics proved in Germany that many who had come early to school had all been doing some work, such as delivering, selling papers, and other work, so that when these children arrived at school they were tired and could not work as well as the other children. There are many similar examples. Now, this threw a great light upon the educational methods by which we judge children in the schools. For

CALIFORNIA LECTURES

instance, it might happen that a teacher, in order to prepare the souls of the children by moral stories, would tell stories of children who, although little, would all work to help the family and she would speak of them as heroes.

Yet, in reality, these same heroes were really being punished and scolded and given bad marks because they were all tired out when they came to school. So the children learned to admire the heroes in theory and to look down upon them in reality. One can see how from this very foundation they started to give a false idea in education. It was a contradiction. These contradictions are fatal in the moral field. One might say that we have grown in this way, living among these contradictions, and are incapable of observing the real facts.

You will understand this theoretical admiration of the fond hero and the incapacity of the heart to recognize the really desirable person when he is present. This happens often in social life and can really lead us on a false road. Because of this, there exist two different worlds for us: the world of the mind which we have built up from theories and the real world which we very often do not know. So it really happened in the schools that the fortunate children were praised and awarded whereas the unfortunate children were oppressed. Of course, this is not true in the absolute sense and neither is it true consciously, but all that is done in the old methods, such as the beginning of work or marking the work of the children so that it gave a proof of whether they had done well or badly or the moral rewards or punishments, represent in great part an objective study of the child. It would be called an objective study because the children who are well nourished and have had sufficient sleep can be recognized by their marks.

The children who have mothers who are able to give a certain amount of attention to them and help them with their studies are the children who have good marks, whereas the children who have been breathing poisoned air, who have had insufficient sleep and who are hungry, whose mothers cannot even read or write nor pay any attention to their wants are the children who have bad marks. For instance, up to a short time ago, children who were deaf could be found out by their bad marks in dictation, and so this (situation) went on in many

SAN FRANCISCO (PPIE)

other ways. One can say that the rewards and punishments and the marking of the child in school can be considered a very incomplete study of the child in his social conditions and, if we suddenly think of removing from the school the prison and punishments and good marks and the demerits, we really will remove a form of imperfect study of the child because the bad mark does not tell us whether we have been using a child who is sick or badly nourished. It does not tell us anything precise. On the other hand, rewards or good marks do not tell us whether the child has a good mother or good nourishment or fresh air or sleep. They do not tell us anything precise, whereas a biological history tells us all this much more precisely.

Thinking that one can influence the child with good or bad marks is useless and impossible. It has not any educational influence on the children. The marks have no influence; for instance, a bad mark cannot make a poor child rich or a hungry child nourished, or a deaf child hear, or any child write a good dictation. Therefore, it cannot influence the child in any way. So we must not be afraid to put all of these things to the side. The little remorse that one might have in removing them will soon be wiped out when one sees the great injustice of putting into the moral field what really was an objective study of the child.

It is as though we take children who are slightly deaf or deficient or unable, and have not had air, and say to these children: 'Why are you deaf and why are you hungry?' It is as though we said: 'How healthy you are and how do you have good sleep and plenty of fresh air and a happy mother?' So in the old way, the teacher did not make this (biological and social) study of the child in the serene and quiet way we do, saying that at such and such a time the child was not well or was coming down with a disease, but, if the biological or social side did not go well, the teacher became excited and angry at the child. In making the precise study of all these things, however, we did not become either irritated or pleased, we simply studied it exactly.

Coming to this serene and very precise study of the child, we began to have light thrown upon it and have our eyes opened to the injustice which must disappear. In this way, we are all taking a step on the real moral path, so much the more as we

CALIFORNIA LECTURES

are in a time of social ideas which tend to bring about a sort of justice for all. Being thus in the social condition, we see that to be unfortunate socially is not a fault and to be fortunate socially is not considered a merit. As this is true today, we must not unconsciously bring the children up in a positive way. For instance, when we encourage or keep on encouraging the well-nourished and healthy child with rewards, we fill him with vanity and error and make him blind to the real social conditions which may render some other child unfortunate or unhappy. We make him grow up with a feeling of disdain for the manifestations of unfortunate or unhappy people. One might say that grave harm is being done to these fortunate children because they are in good condition and it is as though we took away the moral ground from under their feet. We do not say that the heroes are only amongst the poor unfortunate ones because they could also be among the fortunate, but in putting these fortunate ones on the false path with vanity and false ideas of their merits, we are destroying all possible ideas of justice which they might possess.¹

This relates also to intellectual forces. In the schools, we give good marks to the children who have more intelligence and bad marks to those who are less intelligent. If we wrote in our own notes that one child was more intelligent and the other less intelligent, we would not be harming the child by this, but if we make the child understand these things by apparent marks, for instance, giving a good mark to one child and a bad mark to another, then it must happen that the less intelligent child becomes discouraged. Perhaps this is not a great loss socially because the less intelligent child would never have such great power, but when the intelligent child finds that he is rewarded, when he has done nothing more than to surpass one who is not as intelligent, he will not make a great effort. He will be very much satisfied with a simple effort. What would he do to this flame when it would blaze? (It is) we who would extinguish it. We would prevent it from going on. We give to the strong ones satisfaction and we make them contented with what they have done. We do not give them the impulse to act or do more.

We do not say to them, this power which you have and which places you above the others you should make bear as much

SAN FRANCISCO (PPIE)

fruit as possible. Would we instead say to him, 'Be satisfied as you were born. You are sufficient as you are. You are all-powerful'? It is as though we said, 'Be satisfied, you have a good mother and father and you have health and you are all able to surpass this one who is less fortunate and what more can you wish for?' So you see that we really leave matters as they present themselves. We find ourselves with these means to leave the child as he is and not to educate him, not to change him. Not only this, but we try to extinguish the great (things) which are in the strong child.²

In fact, the idea of justice which existed in the school until recently was that all should be equal as far as possible and that all should learn the same things at the same moment, with the same moral stories before their mind.³ (But,) no one was looking at the real moral conditions, as they existed, and no one of them made more rapid progress. If one of them by chance made more rapid progress than the others, he was requested to wait until the others could catch up, whereas we kept whipping up the one who was behind without trying to find out why he was behind – just as one keeps whipping up the poor horse who is pulling such a heavy load that he cannot move it easily. The greatest ideal was that the teacher could at the end of the year have a uniform class.

This is one of the things that many people praised in my method. They said, 'Here, if a child is sick for a week, it is not necessary that all the children should wait until he catches up'. In this method, it is not necessary to wait in order that they should all be at the same place, whereas the old idea when one was sick for a week was that they would all wait until he caught up. They also said that this was practical, because when convalescents came back to school they would not have to work triple in order to keep up with the others.

If we want to think and study these conditions, it is as though the environment of the school were hidden under all the moral shadows, and certainly the scientist, in penetrating the school with the purpose of studying the children, brought a light which was prevalently moral. When science penetrated into the school and revealed all these things, it showed that there were great mistakes in the school and it was a matter of justice to see these things clearly. This principle, penetrated by

CALIFORNIA LECTURES

study, (showed) that the child is an effect of various causes. We will (use it) in order to understand better the fact which is the child. It is really like sounding a trumpet of justice but it is not in any way a reform of education or schools. In this way, we have given bad marks to the school in the same way that bad marks used to be given to the unfortunate child. We have not done anything more; we have left it as it was in the same way that bad marks left the unfortunate child as he was. You will understand that to go on from this point and to reform the school is a further step. It is a step beyond, but that does not mean that we must give up what science has given us. This study of the child, which has revealed these conditions, should remain in the reformed school and become a luminous point of (research), and the teacher who has a real reform of education in hand should establish this study of the child. That is why these studies and these researches which exist in their lives should enter into the reformed schools.

The earliest social research which was done concerning pupils was more or less vague. For instance, the teacher would visit the parents of the child and would find a dirty home and would write a rather detrimental description of the environment. These sentimental descriptions of the environment which were strongly contrasted were not sufficient to give a scientific value. So, little by little, one tried to penetrate into the examination. For example, instead of saying that the family was all crowded together, the following description was given: 'How many rooms are there and how many people occupy these rooms?' These exact and precise questions are also more easily answered because in no case is anyone offended when asked, 'How many rooms are there in your house?' After a time, they are not offended if they are asked 'How many members are there in the family?' Whereas, if you enter a house and all the people are there and you remark, 'What bad air there is, and what dirt and how many baths are there?', naturally they would be offended. This is a simple and precise thing to find out and it was found in home(s) that there were often as many as 14 people in one room. Now you can easily see that when this question has been answered it is unnecessary to ask whether they are clean, and so forth. Neither is it necessary to ask whether they eat satisfactorily or whether they

SAN FRANCISCO (PPIE)

have sufficient food. All of this is entirely unnecessary, whereas in making an exact and precise research of this kind one can (obtain) real statistics.

Also, in relation to the progress of the children in the schools, for instance, (while) making a study of a great many children and then taking the average, one finds that children coming from good conditions, (such as) there being two people for every room, are bad for progress – (since this does not mean) that two people really sleep in each room, but that there are three rooms and six people and these three rooms include the kitchen. So one finds out what are the best conditions possible then also the worst conditions (in order to help the children) make progress. When afterwards the question 'What were the bad conditions?' is considered, this is taken as an average of the whole. Now, this is one of the things that is so simple to ask but it is considered to be one of the fundamental bases at the beginning of social research.

There is another question which is very useful. That is to know how many wage earners there are in the family. For instance, a family where there are 10 people. It would seem as though⁴ this were a very large family and very poor and yet, if six of the ten are wage earners, it would seem the larger the family the better. If it is a workman's family, it is sufficient to ask, 'How many are older and how many are children?' because one knows that all the rest are wage earners. So, you see that it is easy to do very precise and exact research and it is very practical because it is quite possible to do it without what some might call entering into intimate confidence. One might say that these questions really suffice – to know how many rooms there are; how many are working because you know that there is absolutely no progress in well-being with the progress of wealth. This relationship does not exist at all and it is sufficient to know whether there is sufficient (money) for living purposes. When there is a sufficient amount for living purposes, there is really an ideal life. Anything beyond that may be superfluous and harmful, but one can go as far as possible, (even) a little more intimately into the researches. All of these questions have been determined and studied by sociologists.

When sociologists wanted to put as a fundamental basis the study of the family, they entered the social field and not the

CALIFORNIA LECTURES

schools and they have studied the schools simply as one interested in order to find out everything useful. In the social study, there was a very emphatic and sentimental part which has been passed over for the present. The precise social study tends towards the family because one may say that when the social study of the family is done, one really comes to know the roots of social construction.

Now, let us go into detail as much as we are able. These sociologists who are taking up social study of the family say that ladies should interest themselves in this study. For instance, there were many society ladies who took upon themselves as a social and scientific mission to go into families to try to find out how conditions were; (but, they) tried this without much success. You can imagine that a society woman knocking at the door and saying, 'How many rooms have you and what work do you do?', and so forth, would not be very welcome and yet the sociologists saw that a lady would be better able to do this work than a man who was sent to investigate these things. Yet, it was from the study of the family that the greatest light was to come in order to direct the needs of the people - to know what are the real needs of the populace (before they) become a problem. If one considers all the children who live in civilized countries and go to school, and, in this way, so many families come into contact with a lady who is the teacher, who has time at least for a year to inform herself on these subjects, who does not do as the Countess does who takes her automobile and says, 'O, now I will visit twenty families'.

The teacher, for instance, has a year's time to make these visits and after she has once made them, it is possible that the conditions will remain just the same and it is not necessary that someone else goes to make the same visits. The history of one child will suffice for the family. It becomes this social question of studying the family that has a very practical solution. Yet, you can see that in order to make this solution practical you must change its entire nature as long as a school consists of coming in in the morning and talking and talking all of the time (as teachers now do). We wonder when she can ask these questions. One must think of a school where the children can work independently from the teacher and the teacher can observe. Then, as I say, we can ask questions which can be

SAN FRANCISCO (PPIE)

more intimate and which will not only be useful to the children but will be useful to us. It is interesting to know those things which have been proven by experiment to be of importance. Then we would also know how to regulate ourselves so as to act well. One fundamental thing is to know how many people work, and to ask if they have the habit of keeping the household accounts? When there is an exact account of all expenses, this has almost as great an importance as that of not being an alcoholic.

Alcohol harms the body and not keeping an account of the expense harms the economic condition. One can say that with workmen, for instance, there are these two terrible things: drinking, and disease and disorderliness. These are like two doors out of which can escape all (human) power. Besides this, in the account book, one can find the whole history of the family. It is not necessary to ask more than this. (But,) there is also the whole moral history of the family: the artistic side and the history of their health.

The account of the money which has been spent is really the visible part of our lives. So you see the social questions which one asks, for instance, how much is earned? are (a) very superficial beginning as it were, the sentimental question of sociology of past time. But, to know how this money is spent is a precise fact and it is the modern part of economic research. For instance, you will find in the expenditure that they spent much on clothes, whereas they never went to the theater. They never took a little trip and made it a part of the social life of the family. One question which is very interesting to study, and which was made on this point in England, was between a Navy officer and a miner who were earning the same amount of money but they lived entirely different lives.

In the case of the officer, there were a great variety of things: there were teas and dinners, trips, books, and other such things, not a great *quantity* of things but a great *variety*. In the miner's expenses, there was a great similarity: there were gold ornaments for his wife, and food. One saw two completely different types but they both had the same amount. Old-fashioned social research would have shown nothing because it would have shown only the amount earned and that they were both earning the same amount. (Yet,) the old way was considered

CALIFORNIA LECTURES

real economic study – how much money entered into the house – that was an economic study. But in this modern study, when one finds out how much money was spent, it becomes an educational study because it is not a question of the money but an education of the people who are spending it. The fact of having money is not sufficient. One must also know how to spend it and all life comes down to this. Each one spends it for the things that please him most and those who are pleased with rough and restricted things will spend the whole amount on those things without realizing the great number of elevated things there are in the world that it could be spent upon.

The principle of health also comes into this because one can also see how much was spent on medicine. One can find out if they are studious people by the number of books that have been bought. It can become a most minute study. For instance, one person will buy a fine pair of shoes and the other will buy three pairs of coarse shoes and will never have anything fine. You can see the difference in people and one finally comes to see the difference between refined people and unrefined people – those who lack refinement collect a great quantity of things and no quality. Whereas those who have refinement increase in quality and not quantity. But in order to have a real idea of the family, one must also have an idea of rich families and not only of the poor families, and the expenditures show both of these.

A question which I advise and suggest asking is, 'How many servants are working?' In this country, perhaps, the question would have a different value from what it has with us because our servants (are) all over the place, (but) here it is very hard to find servants. It is very easy to see the amount of money the family has and the amount spent on servants (and such) shows the idleness of the family and their social ideas. You will see that strong and active people will try to have the smallest amount possible. They will feel a repugnance towards having the house full of strangers. They will make every sacrifice possible to have a few servants and to have the most absolute family intimacy as it is possible to have. Whereas the weak, lazy ones who do not have this desire for intimacy are always littering their houses with servants, and inviting strangers an

SAN FRANCISCO (PPIE)

much as their economic conditions allow. One of the things which I have found in this country is that there are fewer servants than in Europe and people try to hide them as much as possible, whereas in Europe, there are a great many servants and they are put on parade, and perhaps here that is also true in the families who wish to copy European methods and customs.

There are so many beautiful things in Europe to copy but this is ugly and not nice. When one goes into a rich family and finds a man who stands motionless, bending his finger, like a sign-post on the wall, this simply serves so that the people who go to visit the family do not have the annoyance of speaking to a servant but will only have to look at his hand. When one goes into the family of a prince, it is no longer one servant pointing his finger (and they no longer have to point), but they stand one beside the other and you simply follow the crowd and there is really a development of civilization or progress in this way. This is socially important in many ways because when one goes to a country where there are so many robust and fine men standing motionless, it seems as if there is not much work to be done. It seems a sign of poverty. Where there are fewer servants, it seems a sign of wealth. Now this fact of the servant has a moral importance as (does) expenditure (have) moral importance. There is, however, more important moral research. (You must not be terrified, because I am going to speak only a few moments longer.)

I simply want to say that generally in moral research one simply tries to find out whether people live a moral life or not. I do not know whether this custom exists in your country, but in our country the rich ladies go to study the poor families and they start from the point of view that they are all moral and then they go to seek out the manifestations of poverty, such as alcohol, bad places, and so forth, known (to them) as immorality. This division is really not immoral research. Now, today we know that many of those things called immoral are (the) effects of causes. When we have done the economic research in connection with the child and we know that the child lives in a well-off family, we know that he is apt to be living in a moral family. It goes together. What one generally calls the immorality

CALIFORNIA LECTURES

of alcoholism or criminality usually goes with misery and great poverty and so when we do moral research we really do research into moral sentiments and not the social research which we have already done.

It is really interesting to know in connection with the child in what moral surroundings he lives. There is a very practical way of doing moral research whereas the other kind is very hard to find out because one would have to say 'Does your husband drink? How many times does he drink? Has he ever been in prison? How is your daughter?' That is not moral research and it would be very difficult to do this kind of research, whereas research must be practical. There is one very simple and easy method, (that is,) talk with the people. This is also moral to use, and to listen to what it is that they pride themselves upon and what they boast of, because the really moral criterion can be drawn from what people are proud of. For instance, take two schoolchildren: one who boasts and says, 'I have gotten the first mark'. One already forms a certain judgment of that child. Whereas another child might not care anything about marks or prizes but might care only to make efforts and (to) know his companions. What seems beautiful to us is that which causes the direction or impulse and morality in our lives. Take, for instance, a person always talking about her hat and who takes you into her house and shows you her hats, 23 in number. You know where her taste is. It is a fact which happened recently. You might know her tastes.

There are some people who always show how big their house is. Another person will show you all the signatures and photographs (of) people they have met and who have sent them (to) them. Another person will show you all the works of art collected. One sees the spirit of the person by the things of which he is proud and it is very easy to find out because after you have been with him a little while he begins to tell you about them. Another person will boast of patriotism and will say, 'My Grandfather fought in such and such a battle and I followed after him and my son will be a soldier'. There is another criterion - for instance, in Europe there are people who are very religious and who say 'My life consists of my home and my church'. They are very proud. Some people

SAN FRANCISCO (PPIE)

boast of their charity and they will say, 'I never let Sunday pass without visiting a hospital, or I do a good act every so often'. You will see there are people who boast only of the affection of the family and who will say, 'My husband is very affectionate' and that is the thing of which they are very proud. Some people will boast of their honesty as though it were a weight and will say, 'I resisted such and such a temptation', whereas other people will do it without being conscious of it.

So also one finds out the relation between husband and wife in the family, something which is of great importance in influencing the children. Now here in America the relationship between husband and wife is very different from ours (in Italy). I do not know whether this is true here also, as it is with us, because I do not know American families intimately. I know only the outside, but there are families in Europe where the wife will be present and the husband will say, 'My wife obeys me in everything. She simply thinks with my mind'. An inspector of schools in Rome said to me, 'My wife has been accused of disagreeing with your method, but I do not believe it because I do not disapprove of your method. She must think as I do'. This was the thing he boasted of: that his wife was not capable of thinking without him. In another family, we will hear the husband boast and say, 'My wife does just as she likes. She manages things all by herself'. That is another boast which gives a criterion.

Then you will hear some people boast of things which do not really exist for others, which have no meaning for others. For instance, one will say, 'These are all the medals which my child won in school'. Whereas one person might have a much greater quality, but would not think of boasting about it. Then also there is the criterion because of which one feels regret. It is almost the same lament because some member of the family drinks wine, but in Rome one hears mothers say, 'My child was so robust and strong that as soon as he was born we gave him a glass of wine'. Whereas one may boast and so on, we do not believe in these ideas. One often hears this complaint, 'The son married a girl who was far below him in social standing and of course, it was his duty to do it, but he lowered himself in doing it and anything that he did before that time was alright, but

CALIFORNIA LECTURES

after that he married this girl which lowered his social status'. For instance, I heard in Rome of a prince who left home in desperation because his son married a girl of the people. He would have permitted him to do anything else, but he ought to have respected the family enough not to do this thing. When we hear the people of the family are wailing and lamenting for such and such a reason, one has a description of their morality and it is also greatly important to know of the education the different families have.

Some families will boast and say we are very careful with the children: 'My wife and I are absolutely in accord on this', (We also ought to know) the criterion which they have in awarding or punishing the children with the idea of making them good, (and) the criterion of being companions of their children and of helping them with growing up and being good. So also (we should know) the judgment which the mother gives on her own child (since it) is of importance. (We also should know) the care which she gives to the child and then (we should know) that which I hope will exist more in the future, namely, if the families have just a little light (to know) that the children have their rights as human beings.

1. Given Montessori's emphasis upon the observation of the individual child, biologically, socially and psychically, we can understand why Dewey's view of 'democratic' education of the child socially was so opposite and why so-called 'progressive' educators rejected her method of educating children in the United States.
2. A change in thought occasions the need for a new paragraph.
3. Montessori was well aware of John Dewey, both as a psychologist and as a force in American public education. Indeed, many of the things she states within this 1915 San Francisco lecture, the eighth in a series of twenty-one given at San Francisco's International Exhibition, stand as major, even undermining criticisms of his 'progressive' education philosophy. American public education by its so-called 'democratic' thrust fails to challenge the intelligence of the quick and ignores the intelligence of the slow because it seeks to instruct the 'average' - whatever that means! The individual child's ability has never been the focus of American public education.
4. Wherever 'though' is found, the original transcription typed 'tho'.

SAN FRANCISCO (PPIE)

Measuring physical progress aids us in the child's psychic development¹

Lecture 9: 21 August 1915

This morning we will prepare for the exercise and you will meet again on Monday morning to do the (exercises). Today we will speak of the things which you can do on Monday morning with the assistant. Today and Monday will be the last time when the students of the first Course will be meeting here, but the things that we do in this last session are very useful for the others because you will see the children and follow these exercises in the Demonstration Class.

We will begin now with the anthropological² materials for measuring. We will do exercises of measuring and then we will do some exercises of arithmetic and some exercises in writing and on Monday you can divide yourselves into groups to do these exercises yourselves.

I have erased the formula which you might remember. As long as it is not completely erased, you will remember it better. Now you will easily take the measurements of the stature of the child and then you can also take the measurements to find out the index of the measurements. This you will do in the exercise but I would like to say a few words on the significance of these numbers.

The significance of these numbers is that you can compare them with the table of the average. Now, these average measurements have been taken by authorities, by teachers and also by people who have made these researches (and) who have written on the subject. You will naturally know how one takes the average. One adds the numbers such as the measurements of the individual and then one divides it by as many numerals as there are individuals. For instance, we take the stature of 10 of you and in order to find out the average stature of 10 people one adds all the measurements and one divides it by 10 in this case. Now 10 would be the number of units as there are the number of measurements that are added. That is why one generally makes the average this way counting, A, B, C, and so forth. As the measurements are taken, one repeats the number of units and then one has the

CALIFORNIA LECTURES

average number which generally is the number with which one compares. Naturally, the average number which one takes for the height of the child, $5\frac{1}{2}$ years of age, has not been taken from only one of all the children of the age of 5 years but has been taken from a number of children.

It is interesting to know that when one takes the average of a hundred people, this average is the normal average and it can serve for comparison. For example, if you went into an enclosed country where there was a different race of people and you wanted to know something about their measurements, you would take a hundred of those people and their average and you would have a normal method of comparison. Everybody could have the number which represented the average of their race by taking an exact measurement of 100 people and taking the average from that. We suggest great accuracy in the taking of the measurements of the stature of the child, at least once a year towards the end of the child's year.

There is a great deal that can be studied from these figures and they are very useful for these studies. There are many things that one can find out even in social studies. It is very useful to know the average number. Suppose, for example, that one has taken the measurements of the stature (of) one thousand people of 20 years of age, of any young men (who are) soldiers. Now the stature of these soldiers will oscillate between two separate extremes. They are not all exactly the same height. Some are taller and some shorter and so there will be the short extreme and the tall extreme and there will be many similar groups of equal height. You can easily see that it will be a very simple matter to divide these according to the height, putting in one group all those of ()³ different height.

We will take any number just to show the succession. For example, let us suppose that they oscillate between 30 and 40 years of age. There are some that have all these different measurements. Now with this line I wish to represent the number of men who have this measurement. If there are few, the line is short and if there are many, the line is long. There are few men who are very short, and the further I go on, the more I see there is a greater number of any given height, until I arrive at a certain point, and then, instead, the numbers

SAN FRANCISCO (PPIE)

again diminish. In fact, there are few people who are very short and few who are very tall and most are of average height. This number which represents the greatest number of people is also the average.

If we could be sure of knowing the one central man, it would be sufficient to measure *him* in order to have the average of thousands. Now you will see only one group really has that height or stature out of these thousands of people which have the average measurement. Not all have it. So, when one gives an average number, one gives a number taken from a calculation and not the absolute measurement. Yet there are people who really have that absolute measurement and also they are the greater number in comparison to the other group. They are real in the sense of the race. They have characteristics of great value. It is very different to bring to the race the average stature or really to possess it themselves. To quote another example, if you take the measurements of the length of the foot, the same thing is true. There is the average measurement of the foot of that race or else of that sex or of that age, and yet, in reality, the people measured have feet either a little longer or shorter, many of them. But there is a certain number of people who really have feet of that length and they are the prevailing group.

So, also, if you take the length of the nose, the same thing is true. There are people who really have a nose of average length. If you take the width of the mouth, the same thing is true. If you take the height of the tooth, the same thing holds true and the measurements of the nails, and so forth. There are those people who have precisely the average stature. There are people who have the width between the eyes precisely according to the average measurements and others who have the nose precisely this average length, and so forth. Now, it does not hold true that the person who has precisely the stature of the average should have the (same) length [*sic*]⁴ feet, that he should have a large-sized mouth or nose, and so forth. He may be the one who has the average measurement in one way, but in some other measurement (he is) either large or small, above or below the average.

Now, there are people who have many of the average measurements of the body. There are others who have very

CALIFORNIA LECTURES

few. Those who have many of the average measurements have a special proportion or special characteristic. They do not pass indifferently before our eyes. We notice them. We really have a certain emotion when these people pass us and have many of the average measurements. We feel a pleasure in meeting people of this sort. They are those who are beautiful. The more of these average measurements they possess, the more beautiful they are. We have an aesthetic emotion when we see the person who combines most of these correct measurements.

In medicine, one does these important studies and one finds that the more of these average normal measurements a person possesses, the healthier they are, the least subject to disease. One might say that every mistake, deviating either to one side or another, is a sign of predisposition to some disease. It is a sign of our physical fragility and, in fact, we know that we are never perfectly beautiful or perfectly healthy. When one says that children must develop as far as possible to the height of beauty, at the same time we are saying that they should grow as healthy as possible because when they have the greatest measurements of beauty they have the greatest amount of health. This leads science towards the cultivation of beauty. There is no longer that looking down upon beauty which used to be so common in education. It used to be said that it does not matter if there is beauty; in reality, it does matter. We should do everything possible so that the race should be beautiful because beauty is not a vanity; beauty represents perfection attained and is there to be seen. It satisfies us. So, one might find in the scientific direction of pedagogy a return to the almost partial idea of Greek beauty. It has been found that their statues have almost all of the measurements that have been found by anthropologists to be the average measurements. You see how interesting these facts are.

We said that if we could find one man who has this average stature, we would really be finding the average stature of the whole race. If one could, by eye, pick out all those who had the average stature, think what a privilege we would have, if we were able to do this. I, by merely looking at a person, would be able to tell if that person had the average nose or mouth and another person could tell if he had the average foot measurements, and so forth. Just by looking I could take and pick out

SAN FRANCISCO (PPIE)

the average measurements. It would be wonderful. It is certain that the Greeks had this power. By eye, they were able to take these perfect measurements. If they had this power, why should not we have it? They did not have special eyes; they had the same eyes as we all have. Certainly to us this idea is almost incomprehensible. We must also think of the way in which we have been educated. For instance, the compliment that one pays to another by not looking at them. To not fix your eyes upon a person, to have no idea of the beauty or the ugliness of nature. I have only the idea of saying beautiful or ugly; it is all the same. I see all people covered up, almost to their noses. How can I possibly see (beauty)?

But, if I were in another world, somewhat similar to the Greek, at least when I found myself amongst the children and my eyes were free to look at them as much as I wished and all over, I feel interested in the beauty. I know that where beauty lies there lies health and life. If I kept these children as lightly dressed as much as possible, so I was able to see them all the time, little by little my eyes would no longer be unaccustomed to this sight and they would be able to pick out the average measurements. So the teacher who stands at one side and observes will utilize as far as possible this position and will seek to train her eyes to see. Note that this will not only be a help in making us better at guiding the lives who are growing in our care. It would not only make us better, but help to make others better. We are making a preparation for our artistic education. The Greeks had this foundation for artistic education only. They had the commission to look at people dressed in such a way that they could be seen. You see, we are afraid to be looked at because we are ugly and we are ugly because we have been looked at (only) a little. But, if we liberate our eyes from their bandages, we might imagine a human who would be more beautiful and not afraid to be looked at. (But,) what is said of man is also said of all things. We must look at everything () this education of the eye.

We bear too much in our education the results of a time when goodness was united with having the eyes cast down. We must open our eyes, also materially, as we are almost blind and are really educated to blindness. Just think, we have the eyes to see and recognize things and we have been

CALIFORNIA LECTURES

educated in the way of not using them and to so many, many things the same may be applied. We have so many powers and education has smothered them almost intentionally. Not only has education (not) developed these powers but it has then extinguished them. There was this idea that along a certain line of perfection there was the destruction of self. Why wonder that now there comes so much ideality [*sic*] in destroying humanity! Have we not been prepared for that road of destruction? It is a virtue to destroy the possibility of understanding something and so it must be a greater virtue to destroy (everything) altogether.

In fact, finally, it is a truth that we must change our path in education. There are two opposite paths: the road which leads to death and the road which leads to life. We must now begin to walk on the road which leads to life, which helps life in every way. This path is much more difficult than the other. It is easily understood how it comes late. It is easy to understand because it is so much simpler to say, 'Oh, I must not offend that person by looking at him. Whether she is ugly or beautiful, I must not look at her, and so forth'. It is so much easier to do this. It is much more difficult to say, 'I want to look in order to see which are those parts which are perfect and which are not in order to help this person to live'. We all know that these paths which lead us to death are far easier than these which lead us to life. We all know that it has taken us many years to become what we are and yet, it only takes one moment to kill. The path of life is wonderful but very long and difficult and that of destruction and death is very easy. If we want to put ourselves upon the path of life, it is necessary to begin by education, an education more difficult and more laborious, involving greater work, but which has as a guide Life alone.

I say that as our eyes are not prepared to see, these numbers may help us in the beginning. You will see that we will take in place of the blindness this number. For us nothing exists concerning the eye, but the most precise number exists. The (precise number exists) to such an extent that we can now make with our numbers such a man as Praxiteles, or one of the great Greek pieces of sculpture, such as the Greek artists made getting the measurement with their eye alone. We have

SAN FRANCISCO (PPIE)

the numbers and the means of science which can make us all great artists, although we are still strangers to art and beauty. But you will see that this number alone is dry and barren. For instance, I take a person and measure this person and write down the number, and seeing this alone, the person would just yawn and be bored. It is enough just to speak of it in order to make you yawn. Imagine then measuring thousands and thousands of people and taking the numbers and the averages to get these figures, and think of the tremendous annoyance.

We arrive at the same point as Praxiteles but we are dying as we arrive there. But think, on the other hand, of Praxiteles, the great joy and enthusiasm which they had without this, which is inconceivable to us, to be able, as though by magic, to see these perfect qualities. These average measurements (come) from a person and (we are) able to create an ideal person and to foresee the future. What a different situation. This would be to substitute the number for our possibilities, to develop the power and to use it. (But,) instead we develop all the great means, develop something external instead of something in our power. We destroy any inner power until we become machines and write down figures in order to reach the same point.

They are two different paths. In one, the work is dry and tiring and much longer and difficult as a mental effort, where we consume ourselves or use the vitality or powers that are in us. Then there is another path where we attain the same purpose with the least effort, but developing ourselves so that with each one step we take, we become strong and not weaker and then we can continue infinitely because the more we work the stronger we become. They are the opposite directions of education – the external and the inner education. And yet, we are more sure of the number. We look and we are not quite sure and, as this external part can be useful as a means to benefit, it may be used to benefit that which we have made without inner powers. While it remains as a means of helping development, it is useful, but if it becomes the end in itself and the real purpose, (when) the development within ourselves is forgotten, then it becomes a great, fatal danger or harm.

CALIFORNIA LECTURES

There must exist just that amount of the external part because it is a means of help. It must serve to help the (inner) life develop but it (the development of life) must be the end. To make this idea clear let us take for example the following: we must educate our eyes to see the beauty of the child and to render him more beautiful. But we can also measure to see whether we have been right or not and to help us in this observation. Then the external means helps us. But, if we say this number is more convenient and (we do) not take the trouble to look or observe, then all this destroys our inner powers. We must not be so ready to destroy ourselves. This is our principal sin or mistake. We are always ready to destroy ourselves, even to making a number suffice. Just one number suffices to make us give up our power of seeing or enjoying what we see and hear. We lose all our powers just because of that one cipher and that is what I think we must conquer in education and give the feeling of life. If we think that for this we have all become blind and it is only for this (merely to obtain a mere number), then it is out of proportion. We have a great enthusiasm within us and we are on the long road.

We will see that the fundamental mental order is to distinguish the means which help life from life itself. (But, if we) feel that our condition, our laws, is (the end, then we) lose from sight the end, which is life, in order to rise, or one might really say die to, in the means. Means are precious as long as they serve life. Our effort, (however) in the developing of life crosses this. We must feel (towards) humanity the central feeling of the human soul, so that we may grow with this proportion.

I know that this acclamation may offend many by its wrong application in the beginning, perhaps, but this may pass away as we go on to understand which (is) better. We all have life based on destruction and we have the idea of the Greek but (we) think that the idea is not only that of the body, (when) the same idea remains for all of the higher life, then the Greek idea disappears. (Then the Greek idea) becomes only a part and one unites a whole other part, which has really been the moral part of our civilization up to a certain point, as the beginning. The way of life is difficult but the way (to) death is

SAN FRANCISCO (PPIE)

easy. This we will always repeat. Yet, in fact, many have been lost.

Now, life united is only everything joined, and in every part health, beauty and life have a very difficult path; because of that we must help the powers or forces of life itself and conquer all the difficulties which life involves. This example, I think, makes it clearer than any: when we think that how blind we are, we lose the possibility of seeing. It is folly to lose this because of a number. They are always absurd and because of that we are lost. We always lose our way because of apparently small things. Now, on this obscure and dark point, we will understand which there is in the future. But we will keep this as a principle, that to develop from the inside or from within instead of from without, and to save that which is within, is to save that which is the path of life. It is the path of salvation to develop the inner things while the external things must serve one as aids. So, for example, the child develops by himself of his own accord and the teacher who is a means helps him. But the teacher who substitutes herself for the life of the child kills the life of the child. One must distinguish between the place of the means and the place of the end in everything and especially in the way of establishing the fundamentals of education.

As the clock has gone so quickly and I could not go quickly to come here in the first place and as the continuation of this talk is the whole method, it would be a little long to develop it all here, so we will meet again on Monday. But I would like to have you take away with you this idea which we have come to by means of these little ciphers and the connection with Greek Art by these average measurements.

I would like to have you take this fundamental life as the foundation of all. It is necessary to take this idea and to hold it and to think of it. All the rest will develop of itself as an explanation thereof. When we take as an idea that we must educate or train men for difficulties, nothing is more clear than life and nothing is easier than death. If we want to prepare men in such a way to fight, they could not be better prepared in any other way than when we prepare them for life because all know how to die, but few know how to live. Few have the

CALIFORNIA LECTURES

constancy to do all that it is necessary to do at every moment in order to live. Men must think that the virtue of an instant or a moment is nothing to the constant virtue, and, besides this great difficulty of the intellect, light is necessary in order to live because the larger the proportion the more necessary it is in order to live. We can add to this and we will do it in the following Course.

Up to the present we have done much to kill all the great wonderful powers which were in man, all of his most noble powers, all his divinity. We will be convinced of this, that we have smothered it. We live, and if we do not live amongst people who are dead, we at least live amongst people who are weakened in slavery. (This is the) slavery of the means which have suffocated them. People who have become blind and deaf and incapable of thinking are moving themselves but incapable of the will to live and their will has been broken. Then we must feel and know enthusiasm even in taking this difficult path which is the path of life. (We must) feel this, that man must require the best part of himself, he must destroy the chains which have held him in slavery, and the hymn of Life should sound upon the lips of all.

1. This lecture shows Montessori's awareness of the learning ability of the fetus within the womb of the mother. A brief review of the teaching materials at the University of Rome Medical School shows no such inclusion within their 1890 instructional program. However, elsewhere within Montessori's various writings, she comments upon the *New Testament* scene wherein Mary, newly pregnant, meets Elizabeth, her cousin. St. Luke reports that Elizabeth is in her third month and quotes Elizabeth as giving a loud cry and saying: 'Of all women you are the most blessed, and blessed is the fruit of your womb. Why should I be honored with a visit from the mother of my Lord? For the moment your greeting reached my ears, the child in my womb leapt for joy' (*Luke, 1:39-45*). Thus, Montessori, the medical doctor, seems to have recognized the humanity and the learning ability of the unborn fetus within the womb both from the scripture and from her own observation as early as 1915, an observation which was certainly unique at that time in medical circles whether in Europe or the United States.

2. Although this word 'anthropical' is not found within the dictionary, the context makes its meaning clear. Besides, it is a composite word formed from *άνθρωπος*, a Greek word meaning *human being*, and *πολις*, a second Greek word, meaning *city state*; so it linguistically means 'materials which measure the social human being living in a society'.

SAN FRANCISCO (PPIE)

3. Wherever these parentheses occur and are empty, the typed text is indecipherable and/or corrupt.

4. In cases where the word is different from an English word 'normal' to us today, but where the meaning is clear, I have left the original spelling because this is a translation from Italian, so the meaning comes through; thus, I have used *[sic]* to indicate the unusual word.

CALIFORNIA LECTURES

The biological chart as the basis for the child's psychological study: a history of psychology's educational methods

Lecture 10: 25 August 1915

The most important part for us in the *biological chart* is that part which refers to the psychological study of the child. The teacher who is observing the child can take notes on the psychic phenomena which he observes. I have arranged a little book in which one can take these notes so that it would technically be made easy. There are sheets which can be torn off and on each sheet there is a space where the name of the child is written; then the month and the date. If there is something that interests you, take another page, and so on. In the evening, when school is finished, instead of copying these notes for each child, one tears off the sheet and puts it in the child's chart. This makes it much simpler and easier to take the notes. It is not only this that makes the taking of notes easy, but one must know how to take the notes. This, together with the other, is very difficult but not impossible. One must have studied this direction of education. One must have this special direction for psychological observation, that is, one must know what to observe, what to think is interesting for us.

You will note that biological charts have existed for a long time in the schools. I do not say that they existed for a *very* long time, but since practical science has entered the school (Indeed,) in all the biological charts which are constructed in schools, a great number have included psychological study. In all of these biological charts, there are special notes upon what data to take on psychic subjects. These notes or indications in the biological charts really could show the direction which the psychological study takes. (In addition,) according to the different schools of psychology, there are different directions taken in the chart. For example, there are some notes which indicate sensation – for instance, they might ask how the child sees colors? Does he perceive sounds well? Then there are purely psychological notes, grades of the (child's) attention, power of association, of memory. Is the child intelligent – a little or not at all?

SAN FRANCISCO (PPIE)

(What about the child's) will power, imagination. If the child has moral feelings or not, and so on. All these indications are a judgment on the study of the child, (a guide as to how the study should be made of the child). So the teacher, instead of simply forming her own judgment on the child, will follow this special guide that is given to her. It is not stated upon what basis the teacher should judge, neither in this study (nor) in relation to the method of education.

The method of education is not taken into any consideration in the above-mentioned guide, whereas for the other kinds of research, there are very simple and precise notes. For instance, there are a great many anthropometric notes (which) will say, 'Give the length of the child's hand; the breadth of his shoulder, and so forth'. It gives the teacher the instruments and shows her how to do the work. It is very exact and so also in the physiological question it will say, 'Is the child bright or is he not? Is the child fat or is he thin?', and so on. It is very precise. The teacher has a very exact guide. She looks at this and then she looks at the child and at his color and puts it down. But we will leave out the fact that the teacher who has to give lessons all day never has time to take these measurements, but if one day she said, 'I will let the lessons go and I will study the child', it would take three hours. As long as it concerns measuring and color, and such things, she knows exactly what she has to do, but when it concerns the psychology examinations, she does not know what to do because attention or intelligence and the imagination and the will are not seen by just looking at a child.

It is true that experimental psychology today has given many instruments for measuring the psychic mind, but generally it is not this kind of psychological examination that the teacher is supposed to do. One does not demand of the teacher a psychological examination done with scientific instruments. In fact, to make this possible it would be necessary to have a tremendous laboratory in every school. Of course, you have seen some laboratories of experimental psychology so that you will understand this. It is certain that this psychological examination done by means of experimental psychology can have nothing to do with the questions on the examinations of experimental psychology in the laboratory.

CALIFORNIA LECTURES

Then one would have to take the children one by one into the laboratory and study them. (But,) what would happen to the school while the teacher was studying that one child in the laboratory? To study one subject alone takes three or four days. While this poor subject is being studied, he could do everything except develop his intelligence. Also, those researches which the experimental psychologist suggests doing by the collective examination of the whole class have nothing to do with education.

We give an idea of the measuring of the attention (of the child): the teacher gives the child a page to read. The teacher is armed with a chronometer which marks the hundredth part of the second, and she will say to the child, 'Take this pencil and mark out all the "A's" which you find as clearly as possible'. She waits until the child has marked out all the 'A's'. As soon as the child has finished, she looks at this chronometer and marks the time. Then she takes this page and she counts how many mistakes the child has made, how many 'A's' he has overlooked. This is called measuring attention. It is considered exact because she has the chronometer and it is exact because she can count the 'A's'. But now the problem is to find the *exact* way to measure *attention*. For instance, if all of you should have this examination, perhaps your attention would not appear very fine and then, as each one of you knows more or less practically the grade of attention you have, you would feel that this examination was *exact* for the time of counting the 'A's', but not (for determining) the attention and one can repeat something similar for all of experimental psychology. The means of research are very exact but the thing which is being studied escapes (the measurements) and you can easily understand that while the child is crossing out the 'A's', he is neither able to develop his attention nor is he learning.

So, the psychological examination done in this way would be an impediment to the development of the child. If done all day, there would, after a certain length of time, be nothing left to measure. There would be no power of association or intelligence, (even) if this continued for six months. One would not need to speak of instruction because there would be no learning and so one cannot speak of the psychological examination

SAN FRANCISCO (PPIE)

along the line of experimental psychology. One cannot define it better than by this movement. It simply must be the (measurement of the) intelligence and then it really becomes an opinion of the teacher. It is her judgment. It is like asking a man to judge a case without ever having studied law. Neither has this psychological examination anything to do with the method of education and you probably know that in the history of genius one finds the worst possible judgment by teachers. For instance, we hear of a great author who never could succeed in learning grammar, and so forth. So it means that these judgments are certainly not scientific; they have no (objective) basis. This is an important thing to think of because all other things have a scientific basis. They might not be practical but they have a scientific basis. The guide stops there. It goes up to that point and then stops, and that means that in the school, in the study of the child, we are lacking something precise and practical in what concerns the psychic study of the child.

Since these examinations have entered into the schools through positive science, the methods of education have not changed at all. They have remained just as they were before. In the schools today, there exist all methods more or less, from the oldest to the most modern, a little of all the methods which have been born in different ages according to the direction of thought of the time. So, for example, quoting the different educational directions, all these methods more or less have this purpose: to teach something to the child and the difficulty is how the child shall learn. So there is difficulty for the teacher in teaching the children and at different times teachers have made different kinds of efforts toward having the children learn something. So all the different changes that have been made have been changes attempting to have the child learn something from us.

For example, there is the so-called method of Socrates, where the teacher by questioning leads the child's mind to the point that she desires. By these questions the child's interest is held and he pays great attention, and in that way it is easier for the teacher to lead the child's mind where he wants it. In this way, there can be two different ways or paths. There is the well-known deduction method and the induction method. One begins from something generally (known) and little by little they

CALIFORNIA LECTURES

deduct to something apart. The (result) is something precise. There is the induction method where they begin with a part and conduct the mind to the general. In this way, the teacher can do what she wants with the child. It depends upon her ability with the question and the teacher is really the head of everything. She holds all the minds under the rod of her questioning.

The personality of the teacher is very important. It would seem as though the mind could not do anything unless that man were there questioning, questioning, questioning. We might say that there are two ladders, that the child should either go up or down, but if you had the ladder and the child without the teacher to make it go up and down, it would do no good. Syllogisms can enter into this method like a mathematical problem. For instance, one can say, 'Is it true that a cat has one more tail than no cat? Is it true that no cat has two tails and one cat has three tails?' This reasoning is a logical method of leading the mind. It would be very hard with a method of this kind to go back and find the attention, to make a psychological examination of the attention. It has nothing to do with the method of education.

Another direction in the way of teaching children has been given by psychologists; for instance, the Sensationalists before the French Revolution. At that time, psychologists said that ideas were not formed without sensation and that there could not be an idea if there had not been a sensation. So, with a new direction of ideas the methods of education have also been transformed or changed. We must confess that there is always a great deal of good will in the education of children; the thought of the day penetrates the windows of the schoolroom like sunlight.

Then the intuitive method is born or springs up. They start from objects which the child can feel. That is, the child with his senses both sees and feels them. Instead of this being simply a case of the teachers who ask questions, they give the child objects which he can see (and feel). It is something entirely different. It is entirely different in direction from the Logical direction where the teacher talks and talks to lead the child's mind to where the child sees the objects and leads its thought upon the object which it sees. But naturally, it is always the teacher who guides. So you see that to the teacher is added the objects and one supposes that there can be some (learning) by the child.

SAN FRANCISCO (PPIE)

So it is no longer the great teacher who simply directs but this teacher begins to become like a person coming from market who carries a basket full of vegetables, and other things. She does not come simply burdened down with the weight of the thoughts of her mind, but she carries spoils. She is a little more humble than before. She at least thinks, 'I cannot do all by myself. I must bring these things'. It naturally does not stop being the teacher, because it is the *teacher* who brings the subject, the teacher who shows it to the child and the teacher also lays down certain lines of conduct. The teacher knows that he must go from the known to the unknown. We must go from the easy to the difficult, from the simple to the complex, from the concrete to the abstract. So, the teacher must well know the lines to follow and along which lines he will conduct the mind of the child. This teacher knows psychology. This teacher knows that it begins from sensations. He knows that little by little the mind becomes more complicated and so he goes from the simple to the complex. He knows that the mind is always willing and learning new things and, therefore, he goes from the known to the unknown. He knows that the more the mind grows, the more it can go towards the abstract and so he goes from the concrete to the abstract. So you see the teacher knows his subject and says, 'X will make you go up and down the steps by my questions'. This teacher reasons in a slightly different way and says, 'Now that X knew you I know how to make you climb'. Many well-known or noted pedagogues belong to this period. For example, Rabelais and C() are two well-known names as also (are) Pestalozzi and Froebel.

After this psychology first initiated itself in this way, there was further progress in psychology, especially on the part of the English psychologists such as Locke. So also in the study of the Associationists who were also English psychologists. These psychologists, going a step further from the senses, do not put the greatest importance upon the sensations which are taken but they give importance to the association of ideas. What is important in the development of the mind is the association of ideas and then there are all the analytic ways of finding out how people associate ideas. This would no longer mean the taking of ideas from the external world but the inner working of the mind. The Associationists also found the laws for the

CALIFORNIA LECTURES

association of ideas. When these laws were once found, and it was realized how important they were, this new light penetrated into the school creating new methods of education. For example, the famous method of the German Herbach, who determined the wonder of giving lessons upon the guide of the Sense of Association. Then you will see this further discovery made. It is no longer simply the fact of saying, 'I knew that you must rise from the sensations of the object and build on what is happening when you are learning', and the teacher says, 'I now see how X'. Then one starts to give a fundamental idea which one starts from and then begins to connect this idea with all the things around, so that it will be secure. First, we are at the starting point and then the outside points and then one tries to have them penetrate into the new in this strong way. You see the strong way of putting the idea into the mind and also the scientific way of putting the ideas into the mind.

Then for each thing the individual will learn, he will have a precise technique. Because of this, there has been established a method of education, (since) when there is not some system on which to base it, there is no education. For instance, if a person says, 'I teach Froebel, but I do not teach this altogether as I do not believe in all of the methods'. Then it is no longer Froebel's method because the system is no longer there. If you take away from some pedagogic idea, then the pedagogue's system is no longer existent. When they say that we have a modern school and we will put Froebel in the modern way, it is not possible to do this. One must follow Froebel or Pestalozzi or nothing in order to have some system, or else give the modern method and say this was established in such and such a way and it should be a method. Otherwise it is nothing. One cannot do anything by taking away from a thing; but one must add to it. One can not make a thing by removing from it.

In every new method of education, there has always been first a movement of thought which has preceded the method. There is an external movement of thought and then, as I said, through the windows the light of thought enters the school. Now in our schools there are all these methods. One might say the sunlight has entered (from all) the days that were. The light of the sun is entering as it is setting. It is certain that

SAN FRANCISCO (PPIE)

There is a lack of balance between the progress in the outside world and the progress in the school. So, when the scientist wanted to enter into the school to study the child, (the scientist) found nothing modern in the formation of the mind. Where it concerns psychic examination, one stands without having firm ground to rest upon, as we said at first. There is no longer precision when we come to this point because the scientific decision which is that each should penetrate finds that nothing precise has been done concerning the study of the mind.

Now, our time of thought, which is modern thought, was begun by positive science which was born in these latest times. It was born after the thought which formed these methods of education. Positive science was born after that period and that is why we find ourselves at this moment in a time of war. Do not think that I am alluding to the European war. I want to speak of a very innocent sort of war. I want to speak of the siege which positive science is making on the school. Let us suppose that the school represents a less civil country and what is going on in the civil country, which is the outside environment, is trying to conquer the less civil country. (But,) the more civil country does not open its doors, so the war arises, and as the school is something which is closed the siege starts, and the shots have begun to enter. Arrows are flying through the air. Fortunately it is not a very violent war. For instance, hygiene has started to penetrate (education) and has found horrors. It found children who were becoming humpbacked, who were becoming blind, who were famished, who were becoming suffocated – children who were anemic, and so forth. (Now,) it has started to bring in civilization which has already reached the outside.

Another arrow was sent by anthropology which said: 'I might know something about these children; I could direct their growth'. They began to establish dogmas and reforms which are in the schools today. But the reform of intellectual development is lacking. We might say that we are at the beginning and the end – which is really all that is lacking because the method of education is lacking. We have children who breathe better than the children who used to breathe the air. (We have children) who no longer become humpbacked and

CALIFORNIA LECTURES

blind. But the methods of education are the same and a method of education should enter as a precise system. So you see in what period of the siege we now are. We are at that moment when the city says, 'I cannot resist; I can resist no longer and X must surrender'.

In fact, one sees that in all schools they are trying to make modifications. No longer do they hold absolutely to their method. All are removing something. They are really giving up that which is their own country. They are all disposed to give themselves to the enemy. They say, 'X will do something modern, which is no longer as it was at first'. It is at that period of confusion of the siege where they say, 'I will surrender'. This is not to have modernized the methods of education. This is surrender. This modernization is not to put in new methods of education, it is the beginning of the reactions of the old. Now, if one wants to penetrate into the school at this moment of its evolution, the concept which has already been formed in the outside must penetrate – that is, the idea of the personal which is outside the school.

Just as in the time of the Sensationalists and the Associationists, the idea which was in the outside world must enter. The idea which is held today, the interpretation of the personal basis on the positive idea – which is the dominant idea of that time – must penetrate. This is the idea which is given by biological science, which considers living beings as a whole, in their entirety, in their synthetic unity. So one should observe and study (each living being) as a form of life. Each living being needs an environment which corresponds to his needs. We must have the environment which makes it possible for him to live well according to his life. Every individual who lives in his unity, his entirety or his characteristic, one might call a psychologic characteristic. Although it is not only a psychologic characteristic, it is the characteristic of the whole life and of all living beings – also of those which have not even got a nervous system. Yet (it) represents the synthetic part important to the highest degree of the living being and it is the characteristic of re-acting to the external stimuli, that is, the whole living being responding to the stimuli. This is the concept, the re-action or the re-active being. This concept reminds one of the Sense period, also of all the other concepts, but especially of that.

SAN FRANCISCO (PPIE)

It might remind one of what the Sensist period used to object to and that objection served to make the first step and then afterwards lead up and up the whole way that the teacher was to lead the pupil. But here it is not the same concept. The stimulus is the whole of life in its entirety, and this concept of life which is moving and reorganizing itself around the stimuli is a fundamental concept of life. It is a fundamental and necessary concept of life. In fact, biology recognized that in animal life the stimulus has the same importance as nourishment, and that the reorganization, the formation and the perfecting of the organism is in relation to the stimuli, to which it all re-acts. Now, the method which has this biologic concept as a basis should no longer consider the ways by which a teacher can teach certain things, but should seek the stimuli which are capable of producing certain determined re-actions, complex re-actions of the whole of life in its entirety. To determine these stimuli is what is necessary for a method of education based upon these (biological) principles. Now to determine these stimuli and to find out how to use them all goes together. This is (what our) method is concerned with. So there will be a great deal to talk about next time.

CALIFORNIA LECTURES

The manipulative materials in relation to the child's psychic development

Lecture 11: 26 August 1915

Today, I will give the notes for psychic research in the biological chart. This guide to observation is in direct relation to the method of education itself. It is a guide (we use) to begin (in looking) over the psychic development of the child with (our) method. As I have said, we have not here the teacher who teaches as in other or regular methods (of education), but our education is founded on a biological principle. This principle consists of considering the pupil as a being who acts in his complexity to exterior stimuli. We offer the child objects; these objects have been established by experimental foundation to attract the child.

The (fundamental) basis of this experiment is this, that the objects must very strongly attract the child's attention and hold the child's attention fixed. All objects are not capable of potentially¹ attracting the child's attention. On the contrary, we know that it is very difficult for a child to hold his attention constantly on an object. One knows besides that it is characteristic of a child's attention to pass from one object to another, that is, to be unstable, and so this is a fundamental fact to observe. This is a fact, when the child fixes his attention upon an object. Now the objects which we present do not simply allow superficial observation, but they are to be handled and serious work done with them. So this attention which we observe is not simply an attention of the child looking at the object fixedly, but it is an attention which attracts and holds the child's interest for a long time, and, as this activity lasts for a long time with the object, we can call this activity *work*, so to speak. To use simple language, we can say that the fact to be observed is that the child occupies himself seriously and constantly with the work. (Since) there are so many works which can be offered to the attention of the child, it is good to see what work it is that attracts his attention.

The child may show this fact to the observer, (namely,) that he is very slow in his work; there is this other fact to notice, (namely,) that this child is very constant in his work, that is,

SAN FRANCISCO (PPIE)

he repeats it over and over again. Now, this (fact) is a guide, I repeat, to this form of observation: to notice when it is that a child is fixed at his work because he might stay several days before he would really fix his attention upon any work. Then, we must see what work he chooses. Then observe in what way he progresses with his work, for example, if he is very slow in carrying on his work; if he repeats the exercises many times. Upon this basis, we can see what peculiarities the individual shows in working the exercise. For instance, he would not stay for three hours at one work, but he would successively apply himself to different works and it may happen that he would not show the same attention in all work. In some (he is) constant and (in others he is) interested in different exercises. So we can note this fact: to what work he applies himself in a day and with what constancy he shows his interest in the different exercises. It happens that when a child has shown most constancy in a work that he becomes industrious for many days, that is, he is not satiated by what determined certain work that day, but that work which interested him at a certain time continues to interest him for many, many days, until he, having exercised himself in this way, has become matured in relation to these objects.

After this fact has occurred, the child feels the need of some other work. It is the children themselves who manifest this need of progress. They may manifest this need to progress in many different ways; for instance: by becoming agitated or tired of the things with which they are working, or else by verbally asking for a continuation of the work, or else, he, by himself, may spontaneously go in search of other objects. Then it would be interesting to observe which way the child shows his need to progress: he will progress either spontaneously choosing another work, or asking for some further work, and then it is interesting to observe upon which successive object or work this fixed attention is seen. That same attention which at first was fixed on a work at the beginning and which then led the child to a series of graded degrees of attention is very different from the attention which he may apply after several months. With exercising, the child gets such a strength of attention in his work that it is as though he would isolate himself.

CALIFORNIA LECTURES

It is his attention which reminds us of the attention of the genius who is creating something with his work. He who is doing creative work, like the mathematician of Syracuse who, when the city was being besieged and the soldiers were entering and firing the city said, 'Oh, do not disturb my circles'. That attention which isolates the scientist and makes him almost like an eagle on a high peak above all others, a thing which is so hard to hold or attain that it is considered only of the genius because most people are accustomed to passing easily from one thing to another.

In our attention to the simple things of life, because of which we feel difficulty in listening to a person talking for an hour, that attention which can fix itself for the whole life is something great to attain because interest generally passes lightly from one thing to another. For instance, a person who is interested in charity says, 'Oh, I must not only do for those who have tuberculosis, but I must help orphans and animals and see that tenements are kept clean, and so on'. The more a person can do, the better they think it is. It is difficult to find the person who says, 'I have done that thing which attracts of holds my life'. We know that when those people who feel themselves held by one thing can produce much in the world, those people we consider superior and almost outside of our range such as the genius and the convert. It means that these children who are learning more and more to fix their attention upon one thing are following the path which is not ordinarily followed by our children. They are following a path which leads them to a higher form, a more elevated form, a form which we put aside in our life now as something exceptional.

And so, when the child who develops through exercise that attention which he first fixes on a work, then he has arrived at the point where he is able to isolate himself from his environment. For example, a child may be doing any work whatever and a hundred people may enter the room and the child continues with his work as if nothing had happened. Someone starts to play the piano but the child does not notice. All the children may get up and dance and sing, but the child does not move. This (attention) is something quite different from that first attention fixed upon a work in order that he shall do some other thing that we want him to do and when he is finished

SAN FRANCISCO (PPIE)

doing all that we require of him, he returns to the work that he was doing at first. The fact that we have made him leave his work and go and do some other work has not been sufficient to take his attention away from the first work. In this way, we can follow the various grades of attention.

We should observe the child and see when he reaches these various grades. Now I must dictate this guide to you. The guide refers to observation of the work of the child and the title is 'work'. But you know that this is a complex psychological work founded upon the attention of the child. Notice when a child begins to remain constantly at work; note what the work consists of and how long he persists in it; note the slowness in carrying it to an end, the repetition of the same exercise, the length of time he takes in finishing it and the amount of time he takes; the individuality practiced in the application of the different works; to which work he applies himself successively on the same day, with what amount of constancy; if he has spontaneous periods of industry and for how many days; how he manifests the need to progress; which works he chooses in their progression and whether he stay at them with persistence; persistence in work in spite of stimuli in the environment which would tend to attract his attention; if after a false distraction, he takes up again the work in which he was interrupted.

In this guide to the observation of the (child's) work, you will realize the plan of education laid out (is) different from that which we are accustomed to because the great difficulty in other methods is to attract the other's attention and to hold it. So much so that the walls of the schoolroom are made as bare as possible so as not to distract the child and one knows that a visitor distracts the children and is ()². So (in that method) one knows that all external stimuli distract the children and the whole art of the teacher consists in holding and attracting this attention which is always escaping. The attention also plays a very important part in other methods because the whole effort of the teacher consists in holding the child's attention, and the fundamental thing is keeping the (child's) attention.

But here (in our method,) the attention appears under an entirely different aspect, not only because it is very intense but

CALIFORNIA LECTURES

because it is entirely independent of the work of the teacher. Now, the art of the ordinary teacher is more difficult than ours. Suppose, for instance, that I made up my mind to try to hold your attention for a whole year, everybody would obviously find that insupportable, and yet you have a power of attention much greater than that of little children. A person who could not stay and listen to me talking for one half-hour is still a person capable of holding himself to something serious if he is working independently. It is very difficult for one person to take another's place.

This is very different from leaving a person free to exercise his own attention. The person free to exercise his own attention can spend months happily without having to be pushed on by another person. A person can stay many months for 8 or 9 hours a day occupying himself in some occupation as long as the occupation is pleasant. But when, for example, a person invites a guest to her house and she tries to keep the guest occupied in her way, even if she tries to make herself most agreeable and goes with the guest to find out her wishes, she becomes unbearable. She would say, 'You can get up at eight in the morning and you can get breakfast at once'. 'You must have a foot warmer and you can go in the carriage', and so forth. If this one principle is sufficient to liberate people from the oppression of others, even though the oppression is well meant, this alone (is) sufficient to give happiness and activity to life.

Now, let us pass to another kind of observation. When the child develops his attention in this way, working spontaneously, he does not remain the same as he was at first, but changes completely. We notice this complete change in the (child's) changes of conduct. You know that conduct is the external manifestation of the amount of equilibrium which we possess. Those people who have weak nerves, who are tired or hysterical, show their lack of equilibrium in their conduct. Conduct is the external manifestation of the internal solidity of the person. So, little by little, as the child works free in this way, as he solidifies and strengthens his inner self, his conduct changes. The first change which we notice is this: the child passes from disorderliness in his acts to orderliness. When, in the first stage, the child has not yet fixed his attention upon his work,

SAN FRANCISCO (PPIE)

he passes from one thing to another without, one might say, distinguishing one thing from another, so that to do useful work, or to bother a companion, or to give trouble to the teacher are indifferent occupations to him.

When, on the other hand, he becomes fixed in the work, he begins to work, and then he stops at one occupation and his intelligence develops. We might say that in his soul are born determined interests. Then he has a line of conduct because he has these interests which guide him. Externally, we see this fact, namely, that the child passes from disorder to order. This is the fundamental fact to observe. This is a fact of the same importance and parallel, a connecting link to the other fact of fixing himself or his attention for the first time on his work. They are not two facts that follow each other immediately, that is, it does not happen that the child, becomes orderly as soon as he becomes fixed in work. It is not the same thing. I say that in the observation of conduct, this fact of the passage from disorder to order is a fact parallel in importance to the fact of the (child fixing his) attention. So it would be good to note what were the disorderly acts of the child before he became orderly. When a teacher means to become practical in our method, she becomes proud of all the disorderly acts which the child had at first. The value of the orderliness of which she will boast will depend upon the disorder which existed at first. This acts as a comfort to the one who sees the disorder. The fact that the child passes from disorder to order is the fact which the teacher feels most keenly; so much so that most teachers cannot supply a language.

For example: when I ask our teachers in Rome, 'How is your school going?' The teacher simply answers, 'The children are beginning to become orderly', or else they say, 'The children have become orderly'. This is all they answer. It is a word the teachers themselves use spontaneously and it sums up the whole progress of the school. They do not say, 'These children are developing', or, 'These children are making great progress'. They simply say they are becoming orderly. This is a fact which calls the teacher's attention more strongly than the other fact of the child's fixing his attention. In fact, that is like a beginning and a means, fixing the attention, and this is a natural thing, a practical consequence. You see that the forms of

CALIFORNIA LECTURES

expression of these teachers and those of the old-fashioned teachers are different.

For instance, an Inspector of the old school would say that the teacher knows how to hold discipline. That means that she is a good teacher because the teacher who cannot hold discipline does not know how to teach. But, when the children are noisy and do not sit quietly and move about, it is well known that the teacher would not be able to teach. Because of this, in order to classify the good teacher, the Inspector of the school says, 'She is the teacher who knows how to keep discipline so that her school is orderly and she is able to teach'. So, order is the first thing which the teacher would obtain in school. When she has succeeded in obtaining order, then she should begin to teach. Here, (however,) is another thing. First, education begins and afterwards, as a consequence, order comes. This order is the consequence of an inner work which has come when the child keeps holding his attention in these works. So we might say that there, in the other schools, the conduct was a merit to the teacher, but here, it was a real merit to the child because it has been he who has been working up this order in himself, because of constant exercising and working.

In the old school, one goes from the outside and then evidently it is the teacher who has the greatest role: the teacher must first work to achieve order and then she must put into the child's mind those things which she wishes him to learn. Here, on the other hand, progress comes from within the child. It is the child who begins to exercise himself; he constructs his own conduct, so that this order becomes a phenomenon of development and it is really a spontaneous development. This is why the teacher awaits it. It is the same as if one were waiting for the time for a hen to lay an egg and then, at least, we can say the egg is there. There has been an inner formation of something beautiful and then this beautiful thing is seen and the teacher says they have become orderly and she at that moment would like to sing. Now, the teacher who notices what are the particular changes in the conduct of the child little by little when this phenomenon is seen, should observe a little the phenomenon of these changes which have come about. But, when the order is established, it is a fact which may come about from one moment to another.

SAN FRANCISCO (PPIE)

This order, like all natural facts, may establish itself in a child. That is to say, the child usually does not become orderly or go towards this order indifferently; he feels this conquest and he shows this. Now, it is interesting to see if the order establishing itself in the child comes about with crises. For instance, the three kinds of crises which have been noted especially (are), first, the expression of joy because of which the child will jump, laugh and sing, (showing) all signs of an expansion of his personality. Secondly, he has states of serenity which do not show in noisy joy, but the kind of joy or happiness or contentment which the child really feels in his heart; the children move about serenely. Thirdly, the child too has crises of affection. For instance, children will go up to the teacher when perhaps the (teachers) have paid no special attention to (them) before and they will say, 'I love you'. Or else, they will come close to the teacher and they will take hold of her hand or they will go and sit close to her or they will throw her or their companions kisses. Then they seem to be conscious enough to notice for the first time the people who are around them, as though they had awakened from another life.

From that moment, the children take an intimate part with all those around them and at this time one notices the children taking interest when the work of the others attracts them. One might say this is the way which the children have of observing other children and it is an intelligent way, but this word is not exact. It is really a profound and affectionate interest that the children feel in observing others and with this

³ they become intelligent in observing (). It seems sometimes as though the children were more interested than we are in the development of a little child. For instance, this fact was observed by an American lady who visited one of our schools in Rome: the children were seated at the table and they had their hot soup in the plates before them.

There was a little child who had not yet put his bib up; he was trying to put it on and he did not succeed. This American lady was very much interested to see how this would turn out. She saw that the teacher did not help the child to put on his bib and she thought, 'How could that teacher let the child's soup get cold?' Then she thought that perhaps for that child there was something more important than the hot soup and

CALIFORNIA LECTURES

that was learning to do something. For instance, to do this act of order it took a certain amount of ability of putting on his bill and in reality the child did try and try and try; at last he succeeded. When the child succeeded, the lady felt a feeling of relief and pleasure and she was attentively watching the child and the teacher. When she had this feeling of relief, she suddenly heard the cries of joy around her; then she saw that some of the children had their spoons held in mid-air and were watching with the same interest as she was. But they were looking at this child who had succeeded with a tenderness which was almost maternal, and one might say that these children were really watching the progress tremblingly while the lady was watching with a cold interest.

I might dictate these guides for the observation of conduct to note the state of order or disorder in the acts of the child; to note his disorderly acts; to note if there are changes in his conduct during the development of the phenomenon of work; to notice if in the establishing of the order there are crises of joy, serenity or affection. Finally, what part do the children take in the progress of their companions? One other thing: one generally notes in children their great disobedience. These children who pay attention to one object and then another are also disobedient, especially little children from three to six years of age. For instance, you call a little child to have him come to you and he may run away in another direction. One tries to make a little child do something and he cries and rebels. It is because of this that mothers and teachers are preoccupied trying to teach obedience to children and they keep repeating like a sort of a motif 'Be obedient'; 'Obey mother or father'; 'Obey your teacher'. This characteristic of not being able to fix attention or of passing from one thing to another and of not being able to respond to the voice that calls are characteristic of the untrained child.

Now, we must wait for obedience as we said we must for the other phenomena. You understand that if I should say to a child, 'Play the piano', he could not obey. Then, if I told a child to jump up on to a horse's back, he could not obey. Now we have not studied enough to see whether under the child's disobedience there is not something similar to this, that is, to see whether there is not an incapacity in the child. Therefore, the

SAN FRANCISCO (PPIE)

child is not really disobedient, but is simply a child. This child has not yet developed certain activities, certain powers, but when he has developed them, he will be able to be obedient, and until he has developed them, he will not be able to obey.

No we will await this moment when obedience will be established. We will note when the child responds to an invitation. This is always an event. He was called and he came. This is a real principle of life, this responding to a call. This is the beginning of a higher grade of obedience when the child will be able to obey and attend to a command. It is something different to call a child and have this child come and to say to the child, 'Do such and such a thing' and to have the child do it. In order that the child will be able to obey a given command, he must have a will to answer. He must have this will because of which he will be able to answer; also he must have the ability to be able to do the things which the teacher tells him. For instance, if the teacher tells him to run when he cannot keep himself on his feet, he is unable to obey. But if he has acquired an equilibrium in his walking, he will easily be able to run when the teacher tells him to. Now, this is another grade of attention which implies an inner form of development, and that is to obey a command, but then there is a still higher one.

A certain time comes in the development of the child where he almost seeks the command. He desires it. He wants it. When he can obey, he is happy. This form of obedience could never be obtained by external means (of instruction). Perhaps we have all felt it in moments of our lives, but really independently from the teachers in school. This desire to have someone we can obey comes from the feeling of consciousness of other souls and from being able to rest upon this. When we succeed in finding something to obey, we feel a great inner joy. We really are always more or less seeking something to obey in our life, but we are not conscious of this. But there are conscious moments of a desire to obey, this inner seeking to obey a person or someone who has a highly developed inner life. Certainly, in order to obey, one must have a greater richness because we have hardly the strength or the power to do what we think. But in order to be ready to do what others want, we must have a richness to give out. It is like one who has the

CALIFORNIA LECTURES

capability and can give out money to right and left, but one who is poor (or) selfish cannot respond to others.

It is like one who has a large amount of capital and tries to find banks in which to put it. This great inner richness one tries to place in the souls around one, obeying and uniting them. Using an expression which is used by scientists, one may say, 'These children or people who have inner richness have a great power of adapting themselves to the environment'. You know, for instance, that those who are of nervous strength are unable to adapt themselves because of which they may even (be put) out of society. Then the power of adapting themselves to the environment comes from inner richness of power.

This obedience could be looked at from this point of view. Rich adaptability to the environment makes the equilibrium of the person stay intact. Personality remains in equilibrium, intact, and the person can adapt himself easily, just as the person who has equilibrium in walking can walk straight and bend to the right and the left and pick up things and give things, whereas the person who has not the equilibrium can pay attention only to his feet. So the little children whose souls are not steady on their feet are unable to obey, but the more they become strengthened and gain equilibrium within, the more they begin to obey abundantly to the right and to the left with song, like those who are so steady upon their feet that they can dance, and do other things. Their song is the song of pleasure with which they accompany obedience. One might call this the last chapter of the Ascension. Now we will dictate the last things (for your guide) and then we are finished. Note if the child responds to invitations when called; note if and when the child begins to take part in the work of others with intelligent effort; note the establishment of obedience to a call; note in the child manifestations of obedience with desire and joy. Note the various relations of the various phenomena of obedience in this grade: (a) with the development of work; (b) with the changes in conduct.

1. Montessori used the Italian word meaning 'power' or 'powerful'. Thus, Adella Pyle used the closest English equivalent, 'potently', rather than 'potentially'. The English 'potentially' does not carry the message. The Latin *potentia*, however, does, being the Latin word for the Greek *δυναμεις* which English renders as 'dynamic'. English, however, has no such word.

SAN FRANCISCO (PPIE)

Several words are so light as to be indistinguishable.

These two places, at the end of the page 4 of the typed translations are lost, faded off, and yet the text is still intelligible and flows without any loss of sequence.

CALIFORNIA LECTURES

The biology of developmental learning

Lecture 12: 1 September 1915

We must divide our program into two parts, arguments or discussions of theory from practical applications. (The reason is simple:) if we have all the theory together at one time, we get to the practical part too late and vice versa. So, we will have certain days in the week for the practical description of the method and other days for lessons on theory so the lessons will not always follow each other. The subjects will not always go on successively, but on a certain day we might present theory and on a certain day practical work. While I do not feel disposed to become a slave in this sense, I have (established) the program so I feel obliged to do this myself. For the present, we might have the practical description of the method on Fridays and Saturdays. Beyond that I leave myself a certain liberty of action.

Today, I want to speak a little (about) the biological idea I said becomes a base for (our) method of education. The idea biologists give today may be taken as the basis of personality, namely, (that) the individual is a reflex being (who) reacts as a whole to stimuli. To have a broad and deep idea of biology would be good, but suppose we have not that idea? We should know at least certain things in regard to the biological side. Do not be terrified when I take this matter from the very germ of the egg because we will pass rapidly. One seemingly revolutionary and revolting idea in the beginning of biology is that which was called the discovery of protoplasm, an organic substance, very complex chemically (and) found in all living beings. Protoplasm was called the foundation of life. As we saw, life began with the simple cell or a very small amount of protoplasm which little by little became more complex until it made the living being. (We) even came to say, we were able to form beings artificially and that only chemical substances would have been able to form living beings. Biologists (then) reached the point of being able to study protoplasm found in the egg of man. So, if we had a very scientific laboratory, we even could have made man.

They then substituted another theory in place of this one for the simple reason that protoplasm was never found free of

SAN FRANCISCO (PPIE)

separate. In other words, protoplasm is found in all living beings but one never finds protoplasm aside from those living beings, so protoplasm in itself does not exist. Living beings exist who contain protoplasm; the rest is (our) abstraction. Let us give an example. Say, for instance, 'Man is made of flesh'. This is not exact because there are bones, and other things. But just assume, that if we had flesh, we could make a man. The living man exists who has the flesh and so in order to make the flesh one must first make the man. We could speak of the hand of man, for example, but the hand of man does not exist. There is such a thing, but the hand does not exist alone. A living man exists who has hands.

Thus, whatever living beings we wish to consider do not exist unless we have (each of) the living beings intact. This is the modern biological concept. The only way life may exist is as a living individual. We cannot make a higher or further analysis than this because life no longer exists outside of the living being. Therefore, the living being should be considered as the unit or the whole and when we want to be realistic, that is, when we want to be positivists, we cannot consider other than the whole living being. If we do not consider the whole living being, we are no longer positivists. Then we are no longer studying reality.

Living beings have very complex characteristics. All these characteristics together define the living being. Thus, for example, amoeba are the simplest living beings which exist in the animal scale. An amoeba is a cell without (a) membrane. We might say this (amoeba) is a little piece of protoplasm. But such a statement is insufficient because this is not the whole characteristic of the amoeba. The amoeba has all the fundamental characteristics of living beings, that is, it nourishes itself. Suppose that here there is a small substance of nutritional value and little by little the amoeba surrounds it and assimilates it until it has absorbed it; this food substance has disappeared. There was also oxygen in the environment. The amoeba has absorbed it and by means of the oxygen the amoeba is able to accomplish its inner nourishment. This amoeba has the power of being able to move itself, to change form and to put out a kind of false leg. This is a different characteristic from being able to nourish itself and of being able to move.

CALIFORNIA LECTURES

Touch an amoeba with a needle and it distorts itself. Therefore, the amoeba (has) the characteristic of responding to stimuli besides all these other characteristics. If we observe protozoa in a drop of water (through) a microscope, we see the multiplicity of the actions and reactions of these living beings. These little beings, for example, respond to a ray of light. They feel the stimulus of the light. Others are attracted by the stimulus of the light, making a slight electric current. We see some stop at the positive pole, others at the negative. Thus, chemical substances make these little beings feel and draw away. These ways of responding to stimuli are so wonderful that some scientists stop to meditate (upon them).

If there were primordial beginnings of the principles of sub-conscious life in these phenomena, (that is,) something which brought to mind the possibility of choice, and if, therefore, you see a butterfly go towards the light, you might think that there was some attraction like the attraction a magnet (has) for a piece of iron. This would be a physical attraction of (some) kind, or, you might think that the butterfly saw the light, liked it and went towards it. So, if the butterfly went towards the light because of the pleasure, there would be choice here. Therefore, a form of subconscious life would be (present) here. Meditating scientists were wondering if there was not something of this kind even in the protozoa, so this brings us back to the subject of the amoeba.

Amoeba are not simply a form of protoplasm, but are living beings which have the capacity of assimilating and being nourished by oxygen. (Amoeba) are also able to move themselves spontaneously and are capable of responding to stimuli. Here we have a living being with many characteristics. It is not the chemical structure of the protoplasm which characterizes it, but it is the (amoeba as a) whole. We always find such wonderful phenomena that they make us think of consciousness. These two facts are the fundamental principles: first, (the amoeba) nourishes itself and responds to stimuli. When we speak of nourishment, we also include breathing because we nourish ourselves with oxygen; and (we include) sensibility or capacity to respond to stimuli. So, in order to live, both amoeba and protozoa need to have both these things: nourishment and

SAN FRANCISCO (PPIE)

stimulation. We might say that by nourishment they (have) the means of continuing to live, and by stimuli they reorganize and form their own peculiar life. Therefore, we might say that not only man but even the amoeba does not live by bread alone.

These primordial beings have no distinct organs in relation to these different functions. More complex beings, however, always have a greater complexity of organs in relation to the different functions, up to man, who is the most complex being of all. Of course, it is a tremendous jump from the amoeba to man. We might say, however, that we find in man the sickness of these two needs of nutrition, because in man and in superior beings we have two systems which contain these two facts. The heart of the blood vessels assumes nutrition because breathing and digestion do not do other than make blood. They do not do more than prepare the blood and the brain, together with the nervous system which represents the whole or all of the organs which respond to the stimuli. Now, if a little pin penetrated into any part whatsoever of the body, we always have two facts: the blood comes out and we feel pain. Blood and nerves are in every place.

Neither can we find any place inside us where blood and nerves are not. If we could do some elaborately fine work and remove from it all of (these) blood vessels, even the capillary veins, or if we thought of another very fine anatomical operation and could remove the brain and all the nerve centers, we would have two complete men, one without blood vessels, the other without nerve centers in which nothing would be lacking except life. But, if one cannot touch any point without making blood and (striking) nerves, there must be blood and nerves in every place. Fine blood vessels and nerves exist even in the eyes. All the muscles have those tiny little blood vessels which go from fibre to fibre and produce blood vessels, and other things. We would find man to be thus throughout his form, his lungs and stomach also entirely covered by these capillary veins, and the same is true of the nerves (in relation to all the other organs). We cannot anatomically make a preparation to supply all these tiny veins and nerves but these two men exist interlaced tightly in the living man and this one man is made of these two men interlaced and

CALIFORNIA LECTURES

cannot live from nourishment alone. We cannot take part of one man and part of another and have two living men. It is anatomically impossible. Man must also live by stimuli. Therefore, we must have this fundamental conception in considering the individual, that it is this being which is capable of responding, and not only capable of responding but that it itself lives.

Let us analyze the nervous system separately a little, that part which produces the response to stimuli with what physiologists call a clearness of ideas. They decided to draw a figure or plan of these fundamental systems which respond to stimuli to represent this fundamental phenomenon. This figure describes the reflex with an 'arch', the nervous arch, because the reflex feels a stimulus and responds. This would be a path or the way which it prevails. In the arch, this point where the stimulus acts represents the separate organs which are the organs of the senses. This arch represents the nerves through which sensations are transmitted.

At the end of this other part of the arch, the muscle is represented which gives the movement. But this reflex action does not prevail along such a simple road. It must pass a station, (called) the nervous center and these roads are different according to the way in which they are going or (according to) that which they are accomplishing. Those which go from the sense to the center are called the sensitive paths. The others are called the motor paths; or they are called sensorial nerves and motor nerves. They are sometimes called centripetal paths because they are going from the outside to the center or centrifugal paths because they go to the periphery, but the name which they bear does not matter. Whatever they are called, they represent that function and that is what is important. This arch gives a kind of analysis to this phenomenon. We find these organs fundamental.

The organs of the senses, the nervous centers and the muscles are the parts which act in the reflex action. But, if you consider only the senses, it would be unrealistic. It would be like seeking the hand without the man, or the protoplasm without the living being - it does not exist. Only the thing as a whole exists. If you consider only the nervous center, you are unrealistic; if you consider the motor, you are also unrealistic.

SAN FRANCISCO (PPIE)

because that which really exists and exists alone is the whole, or (human being) altogether. We cannot say one responds to the stimuli with the senses. The whole organism responds to a stimulus.

Suppose now that we wish to educate children. If we wish to educate only the child's senses, we would find ourselves embarrassed because it could not be done. If we wanted to educate only the child's movement, we would also find ourselves embarrassed or in difficulty. If we wanted simply to educate the child's power of thought, the brain, we would find ourselves giving an empty education outside of nature, outside of reality. We would not make a man, but would (make) a kind of a monster, something that does not exist naturally.

If, therefore, you should forget that this reflex arch is the representation of the picture of that nervous man who is not that other man who has the blood vessels, you would forget that this man must eat and breathe. Then in whatever way we wished to work upon this (work of) art, it would not respond because it could not exist. So, if we had an idea of a perfect education upon the whole reflex arch, and (if we applied) it without thinking or nourishment, we would find ourselves before a beautiful machine but the coal would be lacking. It is beautifully made, but it does not work.

Sometimes we hear it said, 'Which do you think is better, physical or psychological education?'; 'Why are you against the open air schools because it seems that oxygen is the most important thing?'; 'Do you not think that the most important thing is that the children should be well nourished?'; or else they say, 'What the children want is motor movement'; 'Don't you think, that when they have plenty of space to move, that is sufficient?'; 'Don't you think that liberty consists in moving freely?' Or else, they say, 'I am a great believer in the education of the senses; I think that this is the best thing in education'; others say, 'No, the real education is the education of the memory, or of the imagination'. (Each of them) takes a human being and one says, 'I like the hands'; the other says, 'I like the head' and so forth. Then you see the fight between the different sides. 'I want to find a model school where there will be fresh air and where there will be a place for games'; 'I want to find a school where there will be an economic model kitchen

CALIFORNIA LECTURES

(according to) the laws of hygiene'. Another says, 'I want to found a model school where there will be everything best for the education of the senses; where they will all try'. One sees schools being born of one kind or another and then one goes to see how they have come out and each one hopes that it will be his (or hers) which will succeed.

So this biological concept comes (along) to give a synthetic basis to education. When this concept exists, that is, that the individual is a reactive being, we understand all the principles of life. Biologically, that reflex arch has all of the nervous system, the senses, the nervous centers, the muscles, the blood. One knows that this cannot exist if there is not the vegetative individual, that is, the individual who nourishes himself and breathes (himself) because these two men which we supplied with our imagination, the vegetative and the nervous, are one (being) alone. We could not remove a square millimeter, the smallest measure imaginable from within, or wound any part of the body without taking both blood and nerves (from the whole).

When, therefore, we say that biology has this concept (of the child as a whole) as a basis for education or for life (and) represents the individual, we mean (biology) is giving the concept the unity of the individual from the conception of unity in life. (But, this is not all. Biology is the basis of education because it is) the only real and positive conception (of man); man does not exist if not in his entirety as a whole. So any other conception (of man or child) whatsoever is not positive, that is, real. It is abstract because it does not think of the real man, but of a part which really does not exist. Nothing exists if it is not the whole. The eyes really exist, for example, but not outside of man. Therefore, the oculist wants to become an eye specialist, but in order to be this, he must become a doctor of the whole (human) body because it is known that the eyes alone do not exist. To study the eyes alone is an abstraction. Thus, to educate one part (or another) of a child is also an abstraction.

Now, if we want to enter into a real path, that is, a positive path of truth and reality, we cannot consider anything but the entirety of the individual, a (human) individual (or a child) as a whole. Only if this biological concept becomes the base of

SAN FRANCISCO (PPIE)

education can pedagogy be put upon a positive path. Only then can pedagogy hope to become a positive science, that is, one of those sciences founded upon (reality as) truth (not on an abstraction).

CALIFORNIA LECTURES

Sensorial learning as developmental learning

Lecture 13: 4 September 1915

We will draw a design which does not help me much, but will serve to make the ideas clear.¹ This drawing reminds us of the fundamental conception by which we think of the individual that is, the reflex arch. This arch is nothing but a synthetic plan of the chart which describes the facts and clarifies the idea of the unity of the concept (as in biological examples of the individual man and the child). The fact is that (this) is one thing, that is, the sensation and the passage to the brain and the motor center. Naturally, what is most important is the brain center. Consider the intelligence and the intellect in this sense: the work comes through the (brain) center and the movement but it is the center which directs all; it is the center which puts itself in relation to the outside (world). Now jump from this mental concept to the practical fact (as in the use of our sensorial materials).

You see here a cylinder object. Now, what happens when a child, three years of age, finds himself in front of this object? The child can do this work, this exercise of taking or removing all of these little cylinder (insets) from this block where there are openings into which the insets fit perfectly; then the child can put them back again. He repeats this exercise an indefinite number of times. Consider this object as an object which strikes the sense of the child. The child, in fact, sees it and we say that these objects have different dimensions representing different sensorial stimuli. We might say, for instance, that the visual sense is stimulated to recognize the difference in dimensions of these objects and the different movement which comes in relation to this sensorial stimulus by the child's hand moving these objects or putting them back in this block. Stimulated by this object, the child accomplishes this movement of taking out and putting back the cylinders. You see, therefore, a complete working of the arch. Therefore, (this cylinder set) is a stimulus which produces an activity (guided by thought and sensible stimuli).

However, this activity is not only in the ends of the arch, but in the center and the ends. In fact, we must recognize these

SAN FRANCISCO (PPIE)

cylinders, the difference in them as well as recognize the space of each object; to use this object is an exercise or work of the intellect. If the child is not yet able to recognize the difference between these objects, he might, for example, make a mistake and put the objects in (the wrong) place. The mistake might be in putting the object which is too small in an opening which is too large for it. Then the child might put all of them in this way. They have abundant space and he might think that he was doing it correctly up to the end. But then, (at least) one object will remain which he cannot place and the more the mistake has been from the beginning, the larger the proof of the mistake (is) in the end. If the mistake comes further down the line, for instance, this shows the mistake is always smaller and the more you add up the mistake the larger the proof of a mistake there is. Evidently the objects all fit in at first (but) afterwards they no longer go into place, so the mistake cannot pass unnoticed. There could not be a more material proof.

The child sees there is a problem. How is it that these objects all entered at first and now they no longer enter? Here the child reasons and this reason (perseveres) in searching for the order until he becomes able to find his mistake and to correct it. The child makes comparisons. He reasons until he is able to correct his own mistakes. (In addition to) this exercise of movement and intelligence, the (child) remains a long time at the work, thus exercising his will. We cannot say that this is an exercise which serves to educate the senses. That is an improper and incorrect way of speaking. (This) is a stimulus which provides a reaction of the whole personality, psychic or individual. You see, it is the putting into action of an inner mechanism.

Experiments find that children three years of age will be keenly attracted to this object (the cylinder blocks), that is, this object integrates them in an extraordinary way. The object concentrates the attention of the child. A child of three years of age, for example, will remove and replace these objects 30 or 40 times. When the child concentrates on this work, he is not distracted by any outside stimuli. We have said many times that we can do many things round about (such a) child, play the piano, sing, dance, and so forth, and the child is not distracted in any way, until this series of exercises exhausts itself spontaneously.

CALIFORNIA LECTURES

So the child does not learn this work because someone has distracted him externally (for instance, by teaching him through words), but we might say that this cycle of action or movement which was provoked has been finished. It is exhausted. When the child has finished this series of exercise he is not tired but seems invigorated. He shows a certain serenity and has the whole appearance of the individual who is satisfied, as though it had corresponded to a need of his nature. Here how this object has served as a key and has wound up an inner movement. When this winding has been given, the movement continues and continues until it has been exhausted. Just as we wind a watch and see that the little wheels keep on going and going for twenty-four hours as long as the hands of that watch are disposed to keep on moving from that one winding.

This phenomenon could be provoked with all objects. This object (these cylinders), for instance, would not serve to start similar movement in one of you because such a simple object could not interest your intelligence, given the state of development in which you find yourself. This object may cause the child of three years of age to do the exercise 50 times; it may provoke a much shorter repetition in a child of six years of age. A child of six years of age, for instance, might repeat the exercise perhaps ten times. This is not due to the fact that the child of six years of age is unable to fix his attention upon an object and repeat the exercise many times. A child of six is able to fix his attention much longer upon an exercise and repeat it many more times. If an exercise is adapted, for instance, to a child of six years, he might repeat the exercise 150 times with the same concentration. But it is necessary that there shall be the object adapted to his need at that moment of his development. So you see that you (as teachers) must plan these experiments.

Planning concerns the finding of the objects adapted to that age or that level of development which will provoke this attention and continued movement. Such continued movement is nothing more than a concentration of the intellect, so that it is not only the repetition of this formative inner exercise, but it is the taking of the intelligence and holding it in a special work. This work is pleasant and it does not tire the child, rather it invigorates, because it takes up the complete work of the mechanism of the child.

SAN FRANCISCO (PPIE)

To give you an idea of these facts, although it is not exactly precise, consider this: when you hear music, you start to dance and you are satisfied; you hear a rhythm, have the movement and you use your intelligence because you are recognizing the rhythm and are responding to it. Evidently this recognition of the rhythm is a fact of the intelligence, so much so that it proves itself more and more. On the other hand, we are much surprised if an animal shows the slightest response to a rhythm exactly because rhythm is a work of the intelligence. We are accustomed to have it ourselves, but we are not accustomed to see it in the same measure in animals. So you see that hearing the music and then dancing is something similar to the child's exercise and it gives a great satisfaction.

We feel satisfaction rather than fatigue every time something similar happens in our organism, that is, a completing of something in nature. Hearing splendid dance music does not give the same satisfaction (when) sitting still. Nor does trying to dance without hearing music give the same satisfaction. The whole (not the part) is what gives this unity. It is this which winds up our intelligence and makes it move in a way which is characteristic of humanity. Now we see here the psychic life putting itself in motion according to its nature. Finding the stimuli adapted to the (child's) age is a scientific experiment. Experimental science necessarily has to find what these stimuli are. Suppose, for example, that I have done this work and that I worked to find what were the stimuli which provoked these phenomena. When I have found a series of stimuli of this kind, I have finished a scientific work. Then I can give you these stimuli. I can say that I know that these stimuli provoke these phenomena and then there remains to you the simple task of using them with the children. It is like having a series of keys which wind and rewind up the movement of psychic life, the using of which is very interesting and which in itself is also a scientific experiment.

Find yourself, for example, in a school with three-year-old children. You have, to a certain extent, the ideas which have been given to you with our method. You know first of all that the man of the blood vessels must be satisfied. You know that these children have been well nourished and are breathing fresh air. So they find themselves in favorable physiological

CALIFORNIA LECTURES

conditions. Then there is the experiment of provoking the movement of the psychic life (within). You try to present a stimulus to a child, this inset, for example. Then you observe and see what happens. Certainly if you succeed in accomplishing this phenomenon, and the child with fixed attention puts back these articles or insets thirty times in succession, you will feel as if you (yourself) had accomplished a certain labor.

You await the phenomenon, as scientists who are trying to provoke certain actions. The physicist, for instance, has produced certain lines and when the chemist has produced certain chemicals or obtained certain chemical results, or the biologist finds that certain microbes really produce certain substances which they should produce; all these scientists have the same attitude as you. All have carried out a certain experiment and are awaiting results and may be compared in this respect. This is the difference between such a teacher and a regular teacher. The attitude of the regular teacher is entirely different. She teaches something. The results she wishes to obtain are results of an entirely different kind. She is like the dress-maker who takes the measurements, cuts out the material, pins it, bastes it, sews it and makes the garment. It is she who is acting, who is cutting off and putting together in her way.

Granting these facts: that there is a consideration of the complete being; that we have a complete reflex being and the stimuli which provoke a complex work; then we can conceive of a method of education which would be constructed upon this principle. You see, these objects here are not simply stimuli which give response for a moment, as for example, in experimental psychology. Suppose, for instance, you touch a finger and the person withdraws the finger. In that way, we test the sensitiveness of the person. Or, for example, one touches the surface of the skin with two pointed objects and then one asks if the skin was touched with one or with two objects. When the points are near enough, only one point is felt and then you can test whether a person is more sensitive to touch, taking, for example, the tip of the tongue or the back of the neck, according to the distance they feel between the two points. Experimental psychology is used to test sensibility and the power of responding and then to have, as its purpose, a study

SAN FRANCISCO (PPIE)

done relating to men. This is the purpose of experimental psychology: to study an individual and what he is. This certainly is a satisfaction.

I gain satisfaction finding out how sensitive a person is in all parts of his skin. We can make a mental study. This man who is sensitive while being measured is just as sensitive after having been measured. He is a measured man, but he is just the same as he was before. These objects (the cylinders and their blocks), on the other hand, do not measure something but they provoke a formative activity. During this formative exercise, the individual perfects himself. This is the educational conception in relation to the stimulus. You must not be terrified by something which may seem to you as too material. You say, 'O, how we educate children with pieces of wood?' You must think of what education really is. This idea really is in relation to the perfecting of an individual and this individual cannot perfect himself unless by acting himself. However much we may have an idea that it is not thus, if it really is thus, we will realize it if we think about it. Evidently if I am exercising myself, a young lady cannot take the build which I gain from my exercise. In order to have a build, she must exercise herself and it is not I who must exercise myself.

I may be a most excellent piano teacher, for example, and I play from morning to night in front of you, yet *your* hands will never play. If I exercise my musical ear in a most exquisite way with *your* ears closed, you will never refine your musical sense. It must be you who must exercise your musical sense in order to become a musician, and so forth. I may be a great literary person, but if you do not exercise yourself with letters, you may be an illiterate person just the same.

The fundamental basis of education must always remain that one must act for oneself. That is clear. *One must act for him or herself.* Then all that an auto-motion produces is an educational action. (Some think there is) a principle of auto-education, but it really is education. Up to a certain point, this is a measure because we know that there must be this object on that intellectual level. In a certain way, these objects represent the grades of intelligence according to age and so they become pretty nearly a measure, but the fundamental sign is that they excite continued action.

CALIFORNIA LECTURES

It might seem like a blasphemy to think that objects can educate. When I say, for example, that this object amongst its other characteristics develops the will, you might say, 'Oh, it seems just the opposite to me because the child in this case does just exactly what he wishes'. Then it would seem more efficacious to you that the child should exercise his will in another way, for example, by your saying, 'No, no, that must not be touched'; 'Don't touch it'. But the child's continued exercise is also an exercise of the will because it is with our will that we do everything. Therefore, in doing this exercise, we exercise the will, but it is being exercised on an object which we have prepared and which has a purpose. That purpose is to develop the inner activities of the child which reasons and which leads to carrying out orders which gives and leads to the solving of problems and, therefore, gives an ordered activity. If we should say to a child of three years of age: 'Look at this exercise. Now you must take out these objects (these cylinders) and you must put them in place; if you make a mistake and the thing is done wrong in the beginning, the larger will be the mistake in the end and you must look and see why they do not go back into place and you must repeat this exercise 50 times', the child would get up and run away. You yourselves almost get up and run away when I give this talk.

We certainly cannot think that it is a discourse of this kind (namely, just the use of words) that forms the intelligence of the child. Yet, that is really what many do think. If we as old teachers or as ordinary teachers were to make this the educational problem: to take a child of three years of age to interest him strongly in this object, to make him do all these works of the intelligence and to make him repeat the thing 50 times, what would we say but that we are first-class teachers because we have had great success. Only we would not succeed. That is the difficulty and so it is either to take or to leave it. It is one of those things in which there is no choice. Here it reveals phenomena which we generally do not find in children of three years of age. It is impossible to attract the attention of the child artificially, that is verbally, upon a continuing work.

Teachers know and all psychologists know that the attention of the little child is characteristically unstable because we

SAN FRANCISCO (PPIE)

cannot get it or keep it when we want it. If the inner maturity is helped by this reflex work, we cannot provoke it artificially and the child will remain immature for a long time and the child will be immature. These sensorial objects can produce a phenomenon which other means could not produce. We could not in another way produce this thing. Some, for instance, have spoken of hypnotism with this method. The child, they claim, would have to be a sleep walker. They also said that our materials used a special form of magnetism. And yet, you see how many times a child turns his back on me and runs away when I come. But what does this juggling of hypnotism and magnetism mean? It signifies that there are results that are not obtained by other means. This is the answer and, as these stimuli are less well known than hypnotism and magnetism, they say that the results come from these two things. The moral is that the phenomenon evident here is not common. That means that it is ultra-educative according to the means which we known of. It is clear and exact.

I return to what I was saying before. This sensorial method educates the will. This is a volitional activity and so it is educating the will. True, you generally think that it is educating the child's will to tell him not to do a certain thing. It is considered the education of the will to prevent the child from doing what he wants to do, but this fact of making an individual stop from doing something is a secondary thing in the education of the will. This is very secondary. Suppose, for example, that trains and automobiles have nothing but brakes and we do not think at all of the motor power, as if it does not exist; what good would the brakes be? First, (a train or car) must move and then it must stop. It is useless to develop the brakes when we have not developed the motion. If this is true, then it applies more in this psychic 'machine' which moves first and then finds the brakes. Really in life the child will be more useful the more it moves. We will be so much more useful the more we are able to move. Think of it from a utilitarian point of view. These sensorial objects also create motions which are useful.

Putting the two different paths of education together, one which simply teaches (children) to stop (with words) and the other which teaches (children) to move (with sensorial objects),

CALIFORNIA LECTURES

first be sure that the thing is there, that it exists, (namely, that intelligence is within the child). The existence is the first problem. This is the principal thing from which to begin and then to manage it. But, generally, we do not start from the principle that there must be something there (in the child) to manage, but it may exist in the richest manner possible.² This is the path. This is the thing, to be rich. If these (sensorial) objects enrich and then increase the child's action, we say that they are educational (objects). It would be like the two different theories which there are for enriching: one theory says, 'save as much as you can; do not spend; keep everything'; the other says, 'Win as much as you can, if you wish to become rich; the person who saves is always poor; you can win or earn it'. If we want to teach both, first let us become rich, and then learn not to waste. But first become rich. This is the basis: *to enrich the child's life with activity.*

1. On the top left side of the first typed page of this 'Thirteenth Lecture', is the handwritten comment 'extra good' and on the top right side is the handwritten comment, 'no date - presumably Sept. 4, 1915'; the handwriting seems to be that of Edna Andriano.

2. Here Montessori shows her attitude as different from the 'Protestant' attitude: Montessori takes seriously the *Old Testament* fact that all humans are created in the image and likeness of God, the message basic to the 'Our Father' within the *New Testament*, namely, that all humans are fundamentally 'children' of the Heavenly Father. Human nature is not corrupt, as Luther implied and as Calvin asserted. Montessori's biological experience confirmed to her the scientific fact that the form of life was present in each living organism; indeed, that the peculiar form of life within the human organism is intelligent and volitional. Here she calls attention to the attitude which distinguishes her from others, namely, that children are intelligent volitional beings, not the so called *tabula rasa* or 'blank page' on which adults must write in order that the children become intelligent. She believes children are inherently good and intelligent; other teachers do not.

SAN FRANCISCO (PPIE)

Developmental learning and sensorial objects

Lecture 14: 6 September 1915

Up to the present nothing better has been found than silk for sensorial stimuli using the red and blue colors. The object is not to teach the colors, but to find an object which potently attracts the attention and this must have resplendent colors. If it is necessary to sacrifice the life of the body for the Spirit, we must do it. That is why, for example, we let the child's soup get cold, referring to the story I just told you. These stimuli must strongly attract and hold the (child's) attention. We must, for example, find like objects and seek identity. We must find something similar to cylinders and find the identical place for cylinders. In larger objects, the child seeks graduation. The method by which one enters into the distinguishing of objects is the basis of knowledge and the foundation of intelligence.

This method is: to begin (with known) identities, then to pass to recognition of gradual gradation; to note the quality and difference, (that is,) an object in relation to another is either alike or different; it must be analyzed.

The following, for example, is the recognition of identity: we take two red, two blue, two yellow and in order to recognize the objects, we must have unlike objects. We must be able to recognize identical objects in a mixture. The more the objects differ, or the more that they are contrasted, the easier it is to recognize the identity. Therefore, in offering series in order to recognize differences, as in the case of colors, it is necessary that the colors should be strongly contrasted. Cylinders, for instance, are not strongly contrasted in color but they are materially controlled by their shapes. When we depend upon the child's sense, in this case, the eye, the stimuli must be strongly contrasted. Mix objects, for example, and then show the child how to put them beside each other according to color. If he puts the colors together, it shows that he recognizes them.

If instead of putting contrasting colors, we were to put colors somewhat alike, it might happen that (the child) would not see the difference. He might have understood that he was to put them together, but might not have matched them according to color. If the child does not see the difference between colors, no

CALIFORNIA LECTURES

one can make him see. It is necessary that he should exercise himself until he does see. The eye begins by seeing contrast. Little by little it begins to see likeness and it is necessary first to show strong contrast and then similarity. First, (we) recognize likeness from difference. Secondly, (we) recognize things that differ from close likeness. The distinction of the difference is shown when little by little (a) distinction evolves from gradation and then we must pass from contrasts to similarity. It is easy to recognize the difference between red and yellow but it is difficult to recognize red from another shade of red. In gradations of brown, one should start by having them recognize contrasting differences and then the two extremes. Little by little, we see the colors between and then the final gradation. If a child makes a mistake in this gradation, it means that he does not see the difference. We could correct him by putting the colors in correct gradation, but if the child does not see it, it is useless to correct it. He does not need correction, he needs vision. The Creator should correct his eyes. We should not correct his mistakes.

The inner development which makes him see these fine differences can be brought about only by himself. He not only recognizes color but accustoms his eyes which are different from what they were before. He becomes a different child. This is what is important. This is what is greatest in the education of the senses. These senses have a power of discrimination which they did not have at first. The child acquires power by exercises and by repetition in working with the material. He learns to see better and so the material should be a stimulus which should lead him to repeat the exercises. This work of the whole, psychic individual is an exercise of the intelligence. The child who distinguishes more is more intelligent than the child who distinguishes less because he becomes more active and acquires intelligence. He also becomes different because he () see more. This sensorial exercise makes us see more than he did before and (this ability) is fundamental in practical life.

It is not sufficient to give a lesson in order that the eye might see. If one lesson were sufficient, then the blind would be able to see. In order to solve some of the medical problems, one would have to go by the way of education. We cannot do

SAN FRANCISCO (PPIE)

more than offer the means by which the child can develop and leave him free to exercise himself. In these sensorial exercises, the mistakes serve to make us observe and study the child and observe at what moment he discovers and observes his mistakes and corrects them. Then he has arrived at the new stage in development. We are not teaching the child so that he may learn, but we are giving the *means* of development. We must wait and observe.

These facts of maturing are slow and we must wait until they are accomplished, as we wait for teeth to grow. So also we wait for the power of sight. When education and development are advanced, the child is capable of distinguishing finer and finer differences and is capable of seeing that which is ever more imperceptible. (Then, the child can) make possible what was at first impossible. The child is better educated when he perceives these small differences. What was outside of our consciousness and then enters into it shows our perfection is nearer completion than it was before. We are enlarging the world of consciousness and knowledge. The person becomes more able to absorb more in the external world, just as the artist (does) who sees a world which is different from our world. (Both) recognize a finer perception of form and color which we pass without noticing.

In spiritual richness, we go the opposite way from material richness. In spiritual richness, the person is rich according to the fineness of his perception. In material richness, the person is rich according to the things he attains and possesses. It is not the larger stimuli which lead to education of the senses, but the possibility of being sensible to finer things so that not even the finest things in the world can escape (our perception). We cannot pass over little things, but must be sensible to the finest things possible in order to obtain perfection. We speak of a person as being coarse or fine. The coarse person feels only great differences while a more refined person is conscious of the finer differences. His is the technique of sense. To go from the coarse to the fine, there must be a gradation. If you remove gradation, you remove the education of the senses. Otherwise, instruction and knowledge and not development would educate the senses.

With exercise, many of those things which are outside our consciousness would enter in, so, in a way, we would measure

CALIFORNIA LECTURES

what was in our consciousness. By experiment, we have determined that these colors, which are seven in number, are for the child of three or four years old, the limit of what can enter into consciousness. We must give them (children) the means for consciousness. It is important that the limits should be of the child's capacity. In order to call forth the maximum effort, we must give things (sensory materials) which correspond to this. If we give the things which are beyond this effort, they no longer stimulate to effort. This is why these objects must be prepared by experiment; because of this, the children are attracted to these objects and do give their maximum effort. It is like being with a person who understands. (Both) give response to each other and are sympathetic to one another; they, therefore, are glad to be with (each other) and enjoy living with (each other). These experimental objects correspond to this and the child has sympathy for them and enjoys living with them. Their souls are alike and what I love in a person is what I can understand. These objects are limited to the child and they correspond to him and that is why he responds to them. This attraction has a psychological and experimental basis without which the object would not be attractive. Every object does not attract; it must be those objects which arouse sympathy or response that attract the child. Thus, in order to find a series of objects which correspond to the child and provoke activity, they must have been preceded by some experimental study.

One cannot simply give objects to the child. This is not sufficient. (Such objects) simply serve the teacher in making the child understand. Not just any object will attract the child; it must be psychologically determined and it must provoke spontaneous activity in the child. This activity liberates the child from the teacher and stimulates the child's liberty of action and the formation of the child. This comes () of years

SAN FRANCISCO (PPIE)

Isolation of difficulty and the psychic development of the child

Lecture 15: 8 September 1915

Isolation of the senses is another detail forming part of the technique of our method in the education of the senses. This also might be a general pedagogical principle: to hear or feel one thing alone, one thing at a time. This technique has two parts. One part gives the contrasting stimuli, then smaller differences one at a time¹ and concerns the technique of the external part. The other part, however, is isolation of the senses and represents the technique of the inner part.

Consciousness should have one image alone. Thus, for example, even though we want to attract the child's attention to the different surfaces, that is, the rough and the smooth, it is necessary that these are the only sensations that the child has at any one moment. The child's hand, for example, has the normal temperature so that he would not also be conscious of the difference of temperature when touching, say, pieces of velvet. In addition, it is necessary to teach children to touch the surfaces very lightly, in a special way. You have to teach them how to touch. The touch must be very light because if they press hard, this touch also becomes the sense of pressure.

Much more, however, is necessary. There should be no noise in the environment, nor should visual impressions, either numerous or abundant, be active when the child is touching rough or smooth. The preparation of the senses may also form part of the technique of the education of the senses as regards the individual. These two principles of the education of the senses are more practically shown when we are educating the tactile sense because we cannot make a separate and isolated preparation of the ear or of the eye. It is very difficult, for instance, to isolate color or form in the visual sense, but it is easier to show the preparation and isolation of the sense in the tactile realm.

We can prepare the organ for the tactile sense. Do it in such a way that the circulation of the blood will be normal and active. To help this, bathe the child's hands in tepid water, then

CALIFORNIA LECTURES

dry the hands, rubbing them in such a way as to perform a light massage. We know that the cold hand does not feel very well. A very cold hand does not even feel pain. Then the technique which concerns the individual in the education of the senses, has two things to note: first, the isolation and the sensation; secondly, the preparation of the sense organ. These are the most important principles for the education of the senses. The important thing to note is what concerns the external stimuli and the inner individual. The presentation must go from identity to difference, and, in the difference, from contrast to similarity.

(Although we) talked about consciousness, we must explain that this word 'conscious' is used here as modern psychologists use it. Modern psychologists speak of the field of consciousness, almost imaging a space, say, a circular space. The field of the consciousness is divided by the quality of repression that we have in us. In common language, we also speak of being conscious or unconscious of something. Let us, for example, take something simple which will (make this) very clear. When we have many different sensations and can see all these objects, we have all these representations in our field of consciousness. If we isolate the sense in such a way that only one thing is felt, we could imagine our consciousness having one image alone. In this way of speaking, we isolate the senses which are doing something concerning the field of consciousness. We try to sweep out, to clear the consciousness of the child and bring everything that is there in order to give this one image alone. Thus, for example, if we strongly fix our attention on one determined thing in a very profound way, perhaps we do not hear the things about us because of this (fixed attention). Then, because of the fact that our attention is centered upon one thing alone, if I am speaking intensely with you and speaking of something which I have very much at heart, and some lady calls me, I am not deaf, yet I do not hear her. It is not that I did not hear, but only that the stimulus could not enter into my consciousness at that moment.

When we strongly fix our attention upon an object, we might say that we are cleaning the consciousness of other images (to concentrate on one thing alone. Thus, for example, I am looking at some sight which pleases me tremendously. I have no

SAN FRANCISCO (PPIE)

other sensation except the great pleasure of hearing or seeing or feeling that manifestation. When this is finished, I notice that a pin was pricking me. It was pricking me before, but I did not feel it because it was pricking my arm but not my consciousness. My consciousness concentrated on that one point, that one sight. So, in a certain way, I had isolated myself from everything, even from the pin pricking my arm. In the other case, I was so isolated that I had become deaf. Now, this isolation is a fact of our consciousness.

Suppose, for example, that we are speaking of the tactile sense in the education of the senses. I can also give material from the outside, see this sense acting, so that it will be only the one tactile sensation: namely, the temperature is right; the touching of it is without pressing; and I am doing it so that no sounds are heard and nothing is seen. This is an external aid and what I can do with my consciousness by the intense concentration of my attention is still the foundation of my isolation. It is a more perfect isolation because it would be very difficult in practice to remove every stimulus from the environment so that only one alone would remain. When the person has a very intense attention, then he is really isolated.

When our children begin to learn intense attention to a stimulus and they fix their attention upon one stimulus, they isolate themselves or, at least, they tend to isolate themselves. They have a more or less perfect possibility of isolating themselves. When there is intense attention to something, we say in psychological language that this thing has formed into the center of the consciousness. So the consciousness is concentrated upon something, while in the other parts or about other principles it may become sensitive or insensitive. This center which is there and which corresponds with something is like a polarization. A pole or magnet attracts everything to the center. The concentration of the consciousness is the attention. If we do not pay attention, we do not feel anything and when we do pay attention, it seems that we are putting our consciousness on that thing and that we are conscious of it.

Imagine, for a moment, that this field of consciousness has materialized. You can speak of an external object which attracts the attention and holds it strongly to the point of isolation so that these other things remain scarcely received. Then

CALIFORNIA LECTURES

we can imagine this consciousness which tends to concentrate itself upon one point. We offer a very coarse comparison which does not really enter into this; imagine that we are making dough with flour. Dough is something flat which has no consistency; we cannot do anything with it. We would like to make bread or cakes or pastry, but we cannot make anything. We have to knead it first, or make it compact, and knead it so much; then we can make the bread or cake, or something else. We gather all that is around and knead the material until this dough has become something. So, also, a stimulus which potently attracts and centralizes the consciousness tends to lead it towards a form or towards an organization.

Consider this complex phenomenon of the attention of the child. When this attention is strongly fixed upon a stimulus, it is an inner exercise of organization or formation. The idea is not to sweep out the consciousness and put in one object alone because then one would have the maximum of perfection. I know one thing, for instance, and that is sufficient. No other thing enters my consciousness and, therefore, I am most perfect. No, this is not the idea. It is not this material idea of seeking and learning one thing alone, but it is the idea of a point of attraction which makes the consciousness consistent, which makes it solid and organizes it. It is the prolonged attention of the consciousness to one stimulus and the repetition of these exercises.

A child, for example, is paying strict attention to one object, and at that moment he repeats the exercise many, many times. He isolates himself from the external environment because of concentration, not because of the material facts. The child, for example, may be paying strict attention to one object and be strongly interested in that object. One hundred people may enter and he will not be distracted. So it is not because of a material isolation or because we have put him in one place alone, but it is the concentration of the attention which isolates the child.

Now, this phenomenon of the child whose attention is concentrated for a long time upon one stimulus and who repeats the same exercise many, many times is a fact. This fact means that a solid strength occurs and comes to his concentration. This molding and forming of that concentration and consciousness is

SAN FRANCISCO (PPIE)

Similar to the kneading of the dough. If the child, after having concentrated upon that one object, takes another object and again concentrates and isolates himself, and again repeats and repeats the exercise, he is doing another one of those moldings of his consciousness. When he repeats this phenomenon more and more times, it is as though this consciousness will little by little become a form or inner organism which exists. We might say that it is the necessary way in order to become something because it is necessary for the organization of the consciousness. We might say if you carried this over into a method of education, that it becomes the method of concentration, the method of formation, the method of organization, the solidification of the strength of consciousness.

So many things can enter the consciousness without this strength. We might say that the more that enters, the more consciousness dilates, but form is lacking. It would be like adding flour and water; one would never come to any conclusion. One must say, 'O, but you must make bread'. But one would never do anything. You can think of this soft and flabby or formless consciousness. It is neither round nor circular. Where many things are stuffed in, everything will go in and the consciousness of this point is indifference; this point is indifferent and there is no center. Those formless, soft points can still be dilated and one can always keep on stuffing things in, but the form and the motor forces are lacking. Consciousness is passive and becomes filled by force of inertia. These soft flexible walls will let themselves be spread so that mass can grow because of inertia. Order is lacking. The center is lacking; the form is lacking the power to move and to push or shove.

We might say that there are so many things scattered about in consciousness, that the formation of the human being is lacking. All these things that enter here are lost. They are not all used for a purpose together. They are just temporary deposits. These things that we put there enter and leave with the same indifference. Now, you can see that the path of formation of consciousness must be one alone. It is the concentration and the solidification, but there are various ways of making these things enter. There can be many ways of putting things into this flabby bag of consciousness. The difficult thing is to

CALIFORNIA LECTURES

concentrate on one of these things. It is just as difficult to concentrate on each one of these things that we put into the consciousness. The important thing is that everything entering into the consciousness shall become a center and shall have a solidifying power, so that each thing that enters consciousness forms itself more and more.

This solidification of the center in consciousness through isolation of the senses is the important thing and the fundamental difference between two methods of education, the old one and ours.

1. This talk concerns the need to present materials and to prepare the learning environment in such a way that each material can attract the child to isolate his or her attention and, thus, form a center of conscious learning to develop understanding. Whether or not the audience understood Montessori's presentation is impossible to determine. But editing this lecture required many inclusions, (found within parentheses), so that this single point of the lecture might be better understood by the reader. Hopefully, the understanding of this lecture is achieved through these contextual inclusions.

SAN FRANCISCO (PPIE)

Sensorial materials and the child's developmental learning

Lecture 16: 10 September 1915

If you feel some surface very lightly with your eyes open, if, for instance, you touch velvet with the grain, if you touch it with your eyes open, then afterwards with your eyes closed, you will feel a difference. Try this with anything very, very lightly. The sense feels more with the eyes shut. If you come here to feel these surfaces and your hands are cold, you do not feel the difference until your hands are warm. We also feel the sensation less well when there is motion, as when the table is shaking. Try this exercise at home by yourself.

So, here, in this exercise, we will first prepare the organ. In addition, with the tactile sense, there is this artificial visualisation of the sense when I have closed my eyes. If the sensation was disturbed, for instance, with the eyes shut or open, it is felt more clearly, but motion always disturbs the sensation. Tactile sensation needs calm and quiet. The preparation of the organ should always be noticed, but as we can prepare the organ immediately, for instance, sight (in a) moment, as much as the body functions perfectly. When we rub the hands and the fingers in this way, for instance, it is really simply to start the normal circulation. Do you remember the fact of circulation (in relation to) the physical life of man? The fact is that the object as perfectly healthy is a preparation for feeling all sensation.

Now, we recognize this same fact when the stimulus is perceived from within and comes entirely from within. (But, we recognize it) more clearly in the isolation which exists exclusively when the attention is intensely carried on to some object. We feel the thing definitely when there is this intense attention. It is a different sensation when we touch an object with the eyes open and with the eyes closed. It is as though the external thing grew when we touch the stimulus with the eyes closed. We take it (in) differently. So, also, in the state of calm, we feel differently. The undisturbed consciousness, fixed upon the object feels more. To express this in simple language, we might say that the person feels more than (if the person was)

CALIFORNIA LECTURES

just in a normal state. He understands more. It is like an expansion or growth which then dies down. A great enjoyment also results from this fact of feeling more. You will feel this, for instance, in music. If you close your eyes, you will enjoy it more and so in every fact of isolation, the enjoyment is greater. With music, for example, in closing and opening our eyes, it is as though we were going from more beautiful music to less beautiful music. It is as though consciousness was palpitating.

Intense attention brings a greater enjoyment and this enjoyment keeps holding the attention. So it is like a circle. Intense attention gives great enjoyment and the enjoyment holds the attention so it makes a continuous state. This represents the state of the consciousness when there is this prolonged intense attention resulting from a stimulus. A formation and solidification of consciousness comes from this. If you will, a mind tension occurs, similar to the strings which we tighten when we tune a violin. Or, (it is) like the surface of an instrument such as a tambourine when we barely touch it and the whole thing vibrates. The slightest touch will make the whole thing vibrate just as the slightest stimulus will cause the vibration of the whole, until we feel what at first was not felt, and what at first was imperceptible becomes noticeable. Not only small things cause vibration, but those things which were impossible or (were) even outside before the sensation. Children end up by seeing the slightest differences which at first they did not see. They then have the sensation of acquiring a new and larger world.

Psychologists call this extreme periphery of the consciousness the threshold of consciousness. This is the door by which we enter into consciousness. When stimuli do not reach the threshold, it is as though they did not exist. Then, when the imperceptible becomes perceptible, it is as though consciousness was enlarged. When a difference in colors, or a difference in dimensions or form, for example, is seen which at first was not seen, this consciousness results. As at first, there was a field of attention which is tense but now it is larger; it is always the same tension and with that touch, it vibrates. This describes a process of growth. This growth is permanent; it remains always. Now this process is like a natural process and, in this way, solidification and growth of consciousness

SAN FRANCISCO (PPIE)

comes about. It must be left in the most perfect and tranquil state. We can liken it to a beautiful crystal which is formed in the same way. There must be the most absolute tranquility in the liquid from which the crystal is formed. A disturbance would destroy the growth and the formation.

Now, when the child pays intense or strict attention to a stimulus and repeats the exercise many times until he has finished that cycle of work, he should be left in absolute quiet and undisturbed because he is forming himself. Through the succession of these acts, little by little, this infinite work is accomplished. Do not forget that this state of the child, being attracted to one of these external stimuli, is not a state of contemplation. But it is that complex activity of the arch because of which the whole organism is in action: he has not only poor perception of the stimulus, reactions in a motor activity, but he has the reasoning or the intellectual purpose to be reached. His purpose is to put those certain objects in their places. Here there is also a motor activity because replacing them is a movement. Also in this he must accomplish the purpose of putting all these objects back in their places, and because of this the child must make a comparison between these objects. He must judge with the eyes and other senses that the place and object are alike. He must reason when all the objects do not enter and he has made a mistake. He must correct his own mistake. This movement is a complex movement of the intelligence and intellect. The motor or muscular taken all together is an action of the movement of the intelligence and muscles. A complex activity is developing. The intelligence is in motion as are the muscles and all these activities; they are conscious (activities) and the individual feels them.

Then, for example, when he puts these cubes and makes a column or tower of them, knocks them down and builds them up again, this also is an activity. It is not that the child simply contemplates this and, therefore, his attention becomes tense. But it is the activity characteristic of all this and (that) which corresponds to it; it is also a muscular activity. The child places these objects, which in this case are heavier than the cylinders. Therefore, he is doing muscular movements which need more strength than the first act. They are different forms of activity. He unites to these different forms of activity the recognition of

CALIFORNIA LECTURES

the stimuli which, at first, he did not recognize. In fact, when I spoke of the vibration of the consciousness, the vibration is a movement, a motor movement and the intelligence must also work when it is doing this because there is a purpose to be attained. Children must reason in order to attain that purpose.

In the same way, for instance, an intellectual motor activity is developing when these objects are on a rug and then are replaced on the table, or else, (are) put nearby on the floor, one beside the other. It is the same way through all these objects. When, for instance, the child is preparing these little objects, he separates and puts them together again and he is working with his intelligence. He is judging continually. He is choosing the right and refusing the wrong (material) until he judges that each is right. When he has not seen, even when he judges that it is done correctly and there is a mistake, he is still within that activity which will lead him to see what he does not see at present. In each one of these cycles, work is completed. Not only has an external work been accomplished, such as the grading of these objects, or the comparing of these objects, but also a cycle of inner energy has been completed. The child begins and continues and continues until this cycle of energy has been completed. This cycle must be completed spontaneously; it must be completed undisturbed.

Return now to the comparison of this curious consciousness as something which is tense and vibrates. We say that in touching it with stimuli, however small, it covers the vibration of a larger, wider field and this means growth. A very small stimulus will cause the vibration of a very vast field. It is not simply that it is sensitive to this thing, but that in this sensation the whole is put into motion. It is not only that we become able to perceive a finer grade, but that this perception brings an activity of the whole organism. There are motor forces which are found to be forming themselves in correspondence to this. All of these exercises produce an activity. We can call it a motor force that is developing from them. Suppose, for example, this may not be the correct example, that there is beautiful music. It may be that you have made your senses capable of perceiving the fine differences of sound, but this may not move you. It may reveal your indifference or leave you indifferent. One who

SAN FRANCISCO (PPIE)

does not develop energy because of this beautiful thing heard, is not the active type. This type of beautiful music moves the person and the person cannot see or feel a beautiful thing without acting. With these people who are vibrating and active, nothing can touch them without producing an activity.

Suppose, for example, that beautiful ideas are given to the public and the public hears them and says, 'Oh, they are beautiful ideas'. Then, they stay just as they were before. It is absolutely useless to give beautiful ideas to that public. No purpose is served if the public have that enjoyment and just say, 'Oh, yes, they are beautiful ideas'. Those who cannot feel or hear a beautiful idea without having an activity develop in connection with this, those are the persons we want to develop. Then you will understand that the world would be developed differently; naturally, not even the smaller stimuli would be lost. Everything is lost if there is not the corresponding activity. On the contrary, the more this vibratory motor activity exists, the easier it will be to find things in the world. The more easily the world will move.

Enter the material world, for instance, with a very rough, coarse peasant. To show him some sign of affection, you would have to pat him soundly on the head, otherwise he would not feel it. A finer person is more conscious of the finer things so the slightest sign or light touch will satisfy and attract him immediately and he will act or move. We speak, for instance, in common language of 'dealing with stones'. When we have to deal with people who do not respond, we speak of them as a 'stone wall', or as an impediment to the progress of the world. You can push and shove these people who do not respond or move and you can beat them, but the result will be the same. It takes so much energy and then they remain there in the same position, we could say, asleep. This is the important thing, that these formations and actions shall become complete. There shall be a complete activity. This is the difference between vegetable life and animal life, and so much more has man the activity than these others. Without this (activity proper to humans), we would become plants.

We say that humanity has fallen into vegetable life. It is activity (intellectual, volitional and sensory-motor as a whole) alone which separates us from this vegetable life. It is activity.

CALIFORNIA LECTURES

That there may be this active response, it must be single or a unity of action. It must be one action, so that to each thing the act and the thought corresponds. It must be a whole; otherwise, if we wanted to develop the muscles separately and the intelligence separately, it would be like the pieces in a machine. When one thinks of muscular education, for instance, as the motion of the arms and the legs and the head, as an exercise without purpose, these arms and legs exercising in this way have no connection with the intelligence when they move. The arms and legs are being exercised in one way and the intelligence on its part is learning geography, no connection exists between the two. They are separated or broken. We have, in a certain way, arms without the head and the head without arms; the paths which put these activities in correspondence with each other are broken. What we might call the psychic motor activity is rusted. We can compare it to a rusty machine which cannot be moved. It must *always* move in order to be able to move.

Now, we will see that consciousness which does not vibrate. It contains the most diverse things, but they are separated one from the other. The most diverse things can be contained here. If one of these things has ever become a center and contributed to the organization, we find that one is not more important than the other. They are all together and contradictory things might be here together with the other things at one and the same time. Not only many things are in here together, but also contradictory things can be here together with this consciousness. A stimulus produces nothing because there is no direction and no form in all these things. If a stimulus can find one little point, it can make one more of these little things contained in this consciousness, but it does not make the whole vibrate with a complex action. It is something which may enter here and remain inert. They are like weeds that enter this consciousness which is like a bag. We can push them, but they remain there and do not respond, or else, some colossal stimulus is near to conquer this inertia. There must be something formidable so that this consciousness may become formed.

Very few stimuli are perceptible to this consciousness. We need something tremendous like a passion to push this consciousness

SAN FRANCISCO (PPIE)

and make it become circular. That stimulus which attracts the whole will lead it. This tremendously huge stimulus can act upon this weak consciousness and, when it does act upon it, it drags it along. People will say, for instance, that this person seemed like a person who felt nothing and, after this passion, the person seemed like a different being, more active. Now, for instance, with this war, we hear people say this person seemed like a weak, lifeless person and now is changed entirely and has become active. These people who have been awakened and changed in this way feel that something has attracted them strongly. When a weak, flabby consciousness of this kind is awakened by a stimulus, it is in a position to do things. It is as though it had become a slave to this stimulus, whereas the other, who is always vibrating and responsive to everything, is centered within itself. The other was in a position similar to it, but this is centered in itself. It is not the stimulus which can transform it in this way because it is always active. There is not anything that can make it live because it has always lived. It is not an extraordinary thing which makes it live and become a slave because it knows that life is within.

The need action has to be organized and to have a center, and the joy in this, is so great that it represents the most profound need of the human soul. Humans would go to seek it at any cost whatsoever, even if this meant death, like the war. To feel something which brings life, even if it carries death, is a great deal, rather than to live a weak life. The concept of liberty must be comprehended in this intimate consciousness. This flabby consciousness cannot act and, if it acts, makes itself a slave to the stimulus and is not free. The consciousness which is always active, is awake and realizes its own life is free, that is, really free to act as it wills because it has direction, not because it is something which does not know what it is doing.

Take a more comprehensive example. Look at an insane asylum where the lunatics are kept in chains, as they were a century ago. If we give ourselves the problem of giving freedom to these people, through an external way of giving liberty – what is generally understood would be to remove their chains – then these poor lunatics could walk about in the garden. This would be a conception of liberty, (namely, walking around in

CALIFORNIA LECTURES

the garden). But we imagine a greater liberty, a real liberty, if these insane people became cured and sane, then they would be really free. Now, we can imagine humans in a similar condition with the Spirit abandoned and with external chains. Then we can say liberty consists in removing the external chains, but there is a more profound liberty, namely, that the thing which is disorganized in the inner life becomes organized. This is the liberty of the inner or profound life. This is real liberty.

SAN FRANCISCO (PPIE)

Movement and the psychic development of the child

Lecture 17: 13 September 1915

Exercises which tend to organize the inner life are complex and take the whole activity of the individual. They put into action what one might call the reflex arch and these complex exercises give relief rather than fatigue to the individual. The activity which results from them is invigorating. It does not consume, it invigorates. This principle should be general. It should also remain when we are no longer simply exercising the senses as in the beginning, but also when we take movement as the principal purpose of the whole reflex arch.

We have in ordinary education exercises which would tend to systematize the movements, that is, those which would tend to the education of the movements. This education of the movements in the ordinary method is direct and limited to the provoking of the movements themselves. Hygiene, for instance, suggests the doing of certain exercises with the arms and body on rising in the morning, exercising for strength, or else, the muscles are exercised by the use of separate apparatus, as in the gymnasium or playground where special instruments make for exercising the muscles. These movements are of an entirely different kind from the movements which man makes in obtaining intelligent purpose.

When man moves with a purpose, it is purpose which makes him move to a determined end. This end is determined by the intelligence and it is directing the work of the intelligence, so that one might say that it is the intelligence which is doing the gymnastics. These exercises of the muscles as servants are necessary because our motion depends upon the fact of having our muscles ready or prepared. Or, as one says, in psycho-physiological language, it is necessary that man should have coordination of his muscles. We have an enormous quantity of muscles which must move together in groups in order to give a certain determined movement. It would be very difficult for us to (teach) the education of the muscles only upon the basis of anatomy, as one tends to do in trying to give a scientific basis to gymnastics.

CALIFORNIA LECTURES

One thinks that it is necessary to study the anatomy of the muscles, taking care to see where they are attached, between which bones they are and what functions they have. If they move this bone, or that one, then, there would be gymnastics upon this basis and we could say, 'Now, I know this muscle and how it moves and now I will make these muscles move'. In fact, there are some scientific gymnasium teachers who do obtain exercises to enlarge certain muscles and the teachers give them scientific names. The poor head of the gymnasium is full of these names and scientific terms for muscles. He thinks that he is standing in front of a statue made by the Creator to whom he can give life, as though it were a statue made of clay in which the breath was lacking and the gymnast thinks that he can give the breath. He thinks that he can give life to this kind of clay figure anatomically determined. To move the object as though pulling the cord of a marionette, first the hand, and then the foot. Then (the person working out) begins to measure and take the circumference of these muscles to see whether they have grown, both because he feels that this responsibility is in his hands, and because of this fact that (he) renounces himself and becomes a puppet, obey(ing) the gymnasium teacher, rising in the morning like a marionette to continue (and) he goes to that apparatus which has been made for him to climb upon.

This is one of the modern scientific bases which has been given and the results are like many of the so-called applications of the modern scientists and their ideas. I mean that in this modern time, science seems like a great instrument and gives many new bases, also to education, and one of the bases is that of gymnastics. All this starts from the principle that it is the teacher who must create the pupil. Because of that, it is necessary that the teacher study the child and make him move. This also happens in common or ordinary instruction.

The teacher thinks that he must study psychology and then that he must make the intelligence of the child work. So the gymnast should study the bones and muscles, and then it is he who makes the person move. So it is that a human really renounces his own divine nature and submits to (another) man. (But,) that which should direct man is always his inner life. There always should be, for example, the same principles

SAN FRANCISCO (PPIE)

even for the movement of the finger. There must never be the other man who gives something, for what can he give? He is just like anyone else. If he can give it, we (individuals) also can give it.

It is the intelligence and the same end to be reached that should direct the actions of a human: this is the nature of man. They say it is the principle that man should be immersed in nature and they make a marionette (of men) in the open air. Nature is not only air. The nature of man is man and in a separate way of his intelligence. Air and water are sufficient to give plants life. If we think that the same is true of man, that it is sufficient to give him fresh air and a bath, we are reducing him to a vegetable, to the plant kingdom; we are not considering him as a man. It is really necessary that we reflect on this principle because it is a very common prejudice held today. Between man and an ear of corn, for instance, there is a difference and so the life and nature of these two things should be very different. We are taken today by some delirium, that, for example, of the microbe, (as well as) the delirium of the life of nature where the man is treated like a spear of grass. Because of these prejudices, we have completely changed our language, our expression and our way of seeing things. At one time, for example, we used to say, 'Before speaking a man should think a great deal'; today, (we) say, 'Before a man must swallow, he must chew several times'. All this seems like an ideal reached. We really are on the road to forgetting the motor in thinking so much of man the machine.

Now, we proclaim the necessity of intelligent gymnastics, (that is,) gymnastics of the man who moves in order to attain a certain end. This is also an economic principle today when economics is so much spoken of. When this man is moving without a purpose, he is throwing away this (intelligent) force, (but) this force should be utilized. It need not be said that it is this lack of purpose that is necessary in order to educate the muscles and make them strong. We must not think that it is necessary to remove the purpose in order that the muscle may be exercised, but the muscle cannot be exercised without purpose.

(The little child has) a great need of muscular exercise because he is lacking in the precise coordination of the muscles.

CALIFORNIA LECTURES

Whereas he finds himself at a time when he can more strongly and precisely establish muscle coordination. One knows that it is a characteristic of the child to be disorderly in his movements. The child breaks everything and knocks down everything. He is never quiet for a moment. He makes awkward movements with his hands and his feet. This is a characteristic of a child and these are all expressions of a lack of coordination. These are also expressions of a need of nature to coordinate movements. Therefore, the education of movement should form a very fundamental basis in the education of the little child.

This is an educational principle which has a very apparent significance. (This is also an educational principle) for moral education because when we see children who are disorderly, we say that they are 'bad' or 'naughty'. When we see children who are never quiet for a moment, who run here or there, who grab things and knock things down, we say they are 'naughty' children. So, to correct these movements would be to correct badness. One might say that to correct the movements would be to make the children turn from bad to good. It is because of this that we have our children do special exercises. This consists of some of the exercises which practically all men do in the ordinary course of life: placing objects, for example, placing chairs in a room, or of moving and placing the tables in a room, or of (moving) furniture generally; to study, for example, where to put rugs in the decorating of a room, removing these rugs, then putting them back in place; washing dishes, knowing how to dry glasses, dusting the furniture, polishing shoes, putting all the objects which are in disorder in order; washing their hands and faces; dressing and undressing themselves, and so forth. These are all muscular exercises and also exercises of strength. If one wants to dust the walls up high, one would have to climb up on steps. One can make all possible exercises in doing this work. The porters, writers, maids and cooks know this, (as do) ladies who dress themselves. They all know how to work with their muscles and to do exercises, (even) exercises which are quite hard and which require effort. This is so much so that we try not to do them. So, these are real muscular exercises when they are directed by a purpose.

When you see these little children, for instance, like the little boy of two and a half years old in our class at the Exposition

SAN FRANCISCO (PPIE)

who takes all the little chairs and puts them around. Then, when he sees a larger chair, he stops, looks at it, wonders why there is that large chair, then starts to put that in another part of the room. When he is satisfied with that, he goes back to the little chairs and starts to put them around the room. Then, when he is placing them in the room, he comes to a cupboard, wonders how he can place them there, then he sees that beyond the cupboard there is room, and he goes on. Then he finds a frame on one of the chairs. He stops to find out why that frame is there; he remembers which cupboard the frame was in and he goes and puts it there. He finds that everything is in place and he begins to jump about, goes to the teacher and gives her his hand. Then he goes out of the door and closes it very quietly. One who watches him, thinks many different things.

When one sees this little child start to put the chairs away, after putting one or two away, one thinks that it would be impossible for him to have the constancy and strength to put more than thirty away. Then, when one sees the large chair and sees the child beginning to move it, one thinks that it would be impossible for the child to have the strength to carry that chair and one follows him with trembling soul, watching to see what he will do, more than if he were climbing on one of the pieces of apparatus. It is certain that we are watching an exercise which seems to go beyond that strength which we thought possible and so, without a doubt, the muscles are being exercised. But what appears more important is that the child's intelligence is working. One feels the direction of the guidance of an intelligence in all these works. Besides, one has the feeling that the child is working more with his intelligence than with his muscles. He judges that the large chair cannot remain among the little ones. He seeks a place apart and then he looks around to judge whether everything is right. To do this, the child must observe, judge, reason, decide and choose.

In these exercises of the muscles, there is an intelligent basis, just as there was an intelligent basis to the sensorial exercises. As in the exercises of the senses, in exercising himself over and over again, the child came to have a refinement of the senses and a capacity which he did not have at first, so here, with these muscular exercises with an intelligent purpose, (the child) is always refining his movements more and

CALIFORNIA LECTURES

more. He is always acquiring greater precision until he can far surpass the level which we consider the level of little children. Also, here in these exercises, there should be control of error, the control of the error of the movements. Who could control precise movements? Having a class of thirty children, for instance, and having them move themselves, how could one guide those movements with such precision that they would go towards perfection? For this purpose, the material should have that quality of controlling the error of the movement.

The construction, for example, (of) a set of tables and chairs should be very light. If the child does not know how to coordinate the muscles well, and wanting to pass near a chair, because of his incapacity in passing it he bumps into it instead, this chair denounces him and begins to move itself or else it upsets and turns over. So, (the same thing happens) with the little tables. Until the child has come to coordinate his muscles and to be absolute master of his movements, these light objects show his errors. They move instead of him, outside of his will. They say, 'You made a mistake'. When a child carries a tray with glasses and does not calculate his movements well, or he is not master of his movements and so makes a wrong motion, this cruel glass denounces him loudly, with a loud crash, breaking into bits on the floor. Those pieces of broken glass lie there as testimony that the child has made a mistake. No teacher could give an ordinary correction.

Have you seen how children stand there before the broken glass? Could anyone say to them, 'What are you doing?'; 'Hold that tray and pay attention'. No! The pity that we have is for the poor child because we see that he is very desolate. The other day, I saw a child in this class who was carrying three glasses of milk on a tray. He was walking with the tray tipped a little bit to one side. I trembled thinking those glasses were condemned. In fact, after a few steps, one of the glasses was on the floor with all the milk overturned. A teacher would have said, 'Child, hold the tray straight' and the child would have held it straight. His movements would have been but little help; he would have straightened the tray. (But), with the broken glass, the child has a correction a great deal stronger and more effective. He had to pick up the broken glass, then had to go and get a rag to wipe up the milk. This is the spontaneous result.

SAN FRANCISCO (PPIE)

There was more than the mere correction of the mistake and the wiping up of the milk. He had taken a liking for wiping up the floor. He began to walk around to see if there was not some other spot on the floor. When he found it, he began to clean it and when he had walked over the whole floor carefully and cleaned the marks, he took a tray and went to carry three other glasses and carried them well. He took all the glasses that were there, three by three and, as some glasses had been put on a high cupboard, he took a chair and climbed up to get all those glasses too. He carried them all to their places. Really, in repeating this exercise in that way, he was perfecting himself. If a teacher had said to him, 'Oh, what have you done; you have broken a glass', the poor child would have trembled for a long time and he would not have carried the glasses. Here, immediately, he wanted to do it again. He was really encouraged by his mistake to perfect himself. A great deal of perfection came from one mistake.

This makes one think and meditate how much perfection can come from one error. It makes us think of the Gospel of the Bible where it says, 'Blessed is that error which leads to redemption as a consequence'.¹ A little error brings a great redemption and so it happened in the following story. In Milan, it happened that a carpenter had made a little shelf which was very small and imperfect and on which the teacher used to place the iron insets which serve for drawings. A child would go there to take one of these insets. The child would touch them and five or six would fall to the floor with a great noise. The teacher hurried to tell the carpenter to make a more perfect shelf so that these would not fall, but, as the carpenter was not very quick, it took about a week before this (shelf) came. The children had learned to handle rapidly and easily these iron objects so that they no longer fell. The imperfection of the (shelf) had led to the perfection of the children. The object which multiplied the errors brought about the multiplication of perfection. Thus, we can imagine a very fragile environment in the midst of disordered people. After a few small disasters, the perfection (of the people) will come rapidly. Then we see the ordered person who has the capacity to move among these objects without touching them. This is the sign that the little order has led to great perfection.

CALIFORNIA LECTURES

That environment which denounces leads man to judge himself and to correct himself. To judge the child who finds himself in this environment, we must realize that one of the greatest joys of humans is to be able to correct self and go towards perfection. We must respect the fact that man has a tendency to perfect himself (by) special paths. It is not man who can correct the external man, but it is the inner man who corrects man.² The environment must simply be energetic in the denouncing of errors. The more this characteristic exists in the environment of denouncing and exaggerating the errors, so much more does man develop these inner sensibilities and he begins to construct himself. Then we come to think that when we are amongst the children and try to hide their errors, perhaps we are committing a sin or fault against them because we are preventing them from doing what the instinct of their life leads them to do. We are preventing them from perfecting themselves.

When, for instance, we give them iron cups so that they may never be broken; when we give them anything that cannot be broken; when we give them rag and rubber dolls, so that they can move them as poorly and awkwardly as they want, without ever noticing it; when we nail heavy chairs to the floor, so that they can bump into those until they become black and blue without ever moving them – we may say that we are cultivating imperfection because of miserliness, that is, so that a glass may not be broken; or, because of laziness, so that an object may not be put out of place that we would need to put back again. It is as though we were taking man from the path and holding him back from perfection.

We put ourselves there to judge and say to the child, 'You do not know how to move'; 'How awkward you are; you break everything'; 'Do pay attention', and so forth. It is we who have prevented him from perfecting himself. We reprove him because he has not become perfect. (Yet,) we become angry because of this muscular disorder of the child. We prevent him from becoming orderly. We are really like the Devil who has tempted and who says to man, 'Oh, leave that thing, let me do it for you. I will do much more for you than you do for yourself'. Thus, we say to the child, 'You want to have the chairs put in place and you want your hair combed, your face washed? I will

SAN FRANCISCO (PPIE)

do it for you. I can do it a thousand times better than you could do it'. Just as the Devil says, 'I will do it for you'. He says it on one condition only and that is 'You do not perfect yourself'.

But, when we have fallen into sin, we become angry like the child who has all these disordered movements. He does not know what to do or how to act. When we cover him with reproof and make him feel the desperation of his own imperfection, he not only (feels) imperfect but desperate because of his own imperfection. How many times (we act) in this way towards the child, in doing everything for him. We think that we are good to him. We see a mother, for instance, with five or six children who are very disorderly and who have in their hands rag dolls, woolen bears, and other such toys. The mother does nothing. We say to her, 'Oh, what a good woman you are. See how kind and patient you are'. If the child has the slightest need, this woman picks him up or puts what (he) wants into (his) hands. If the child's nose needs cleaning, the woman cleans it, and so on. If his hat has fallen off, she puts it back on his head and the child remains stupefied. We see these children who have this unhappy stupid look, when they are not openly rebelling because of the instinct within them to perfect themselves. They cannot (perfect themselves) (but) that good person who is near them is a devil. One might say, 'Oh, who is good? What must one do to be good?' This reminds one of the remark that someone made to Christ, 'You are good', and Christ said, 'No, the Father is good', 'The Creator is good'. Goodness also is a clear guide to helping creation or to help development (of man). That alone is the Devil which puts on a mask of goodness. The Devil seems very good, but he is the seducer who drags people from the path of their development and their perfection.

The closest reference to this statement that I can find is in Cornelius Jansen's *Praecomium Pascuale*.

The Catholicity of Montessori, the goodness of creation which Yahweh saw within the *Old Testament* and the goodness of humans which Christ saw deeply influences her view of the children whom she taught and from whom she learned about how humans learn. Protestant Christianity, originating with Martin Luther and John Calvin, the former casting suspicion upon human goodness and the latter claiming the corruption of human nature, stands opposed to her view of how children are to be educated, as that celebrated Congregational statement shows: 'Do as I say, not as I do,' as a father disciplines his child.

CALIFORNIA LECTURES

Correction of error and the psychic development of the child

Lecture 18: 14 September 1915

We must consider as a general principle the preparation of the means of development and correction of error. We must prepare the environment in order that the means for growing be correct. Nothing should pass unobserved. All the materials for the schools, from the furniture to the didactic material, should be based upon this fact. This idea of preparing (the environment) and correction of error is like something which sounds (true) when it is (spoken). It is like the door, for instance, that opens at the sound of a bell. This new idea in education is different from the idea of Spenser who (talks about) Natural Correction. He says, 'Do not correct the child on the spot, but when the child makes some mistake, he will feel the greater results of this mistake if he corrects it himself'. If, for instance, the child cuts himself with a knife and feels the pain, the next time he will be more careful; if he falls down and hurts himself, the next time he is walking, he will be more careful; if he burns himself with fire, he will not play with fire a second time.

So, by means of suffering, the child will avoid certain obstacles because of suffering. It is a very different idea, this idea of leaving an individual abandoned to the environment, an environment which has as its base the hiding of errors as much as possible and (then) letting him advance into abandonment without giving him any means by which to perfect himself, waiting until he becomes a victim of some incident. This idea is very different from the idea of preparing an environment where all errors will be controlled.

The preparation of the educational environment is this, that in this environment which is different from others, no error can pass unnoticed. At the same time, all means are found which are able to develop the child. On this principle should be founded the building and the furnishing of the school. Thus, the school should be much larger than the ordinary school because all of the ordinary schools are founded on the principle that the children shall enter and sit quietly and listen to the teacher who is teaching. So (that) environment is measured by

SAN FRANCISCO (PPIE)

the hygienic principle of giving the cubic air space necessary for (children's) breathing. The principle is this, that the lungs can move and changes of matter can take place.

But, in our school, the large space is for the purpose of permitting the child to develop freely and always develop freely in order to act freely, so that he can freely perform all those acts which correspond to the needs of the (child's) intelligence. He can take all those objects and use them according to the needs of the intelligence, so that it is a psychic, not a material change which is facilitated in this environment. In this environment, as we have seen, the furniture should be very light and fragile because it is this lightness and fragility which reveals all the errors of the movements. Thus, it leads or teaches the child to correct himself, so that he cannot make any erratic motions without this error being controlled. The child comes to perfect even (his) very fine movements.

One might compare this different conception from the environment that receives the child and the difference between the idea we have had concerning the clothing of the child before and after the event of hygiene. Before, when mothers wanted to make a garment for a child, (they) tried to make a dress of (a colored) material which would hide the dirt which would not show dirt. In buying the material, the mothers were preoccupied to find stuff wherein the spots would not show. (But,) after making the discovery of hygiene, white clothes were used for children so that the child could not have even the smallest spot. (After all,) one knows that even a small mark can carry danger, even the danger of death on account of the microbes a spot of dirt can contain. As the danger may be invisible, the smallest spot should be shown. One might say that the hygiene environment is the one which strongly reveals the smallest spot so that the danger may be removed, even when it is in the smallest proportion, because in anything which may cover the spot there is a danger. It is, of course, a thing which costs a little more in money and care, but it is true, also, that from another point of view, these white clothes are more economical. They cost less because they can be washed.

Now, this light furniture in the schools is also less expensive than that heavy furniture made of iron and wood to which we

CALIFORNIA LECTURES

are accustomed. It really requires much greater care, but you well know that this care is taken by the children and not the teacher. It is the children who study how to move these objects carefully so as not to injure them or displace them. The teacher does not do anything more than put the means in contact with the being in his development. All the perfecting of the movements and the intelligence comes from the child himself. The teacher, thus, has far less to do than the teacher in the old method because, in the old method, the teacher does all and obliges the child to do what she wishes. She prepares the means which she thinks best for the child and waits for the phenomena to develop. In this transformation of the teacher, the same transformation comes about as has come about in the work of man. The same might be said of the work of the mother towards her child. In olden times, man did everything by hand or by himself, with his own hands, working much with a great deal of strain. Today, with machinery, man turns a crank or connects something that starts the machinery working and then he lets it work by itself and it goes of its own accord.

One might say, as regards moral development, that the teacher puts on the white clothes which cost less and then gives them to the machine to be washed and then they come out washed and ironed. The teacher should be convinced of this mechanism and be capable of introducing the means, then wait for the phenomena which develop. These intelligent muscular exercises of which we spoke last time were and still are determined by experience. Children aged from about three to six years, whom you have probably noticed in our school, are strongly attracted to these special exercises which we call the exercises of practical life. It is because of this special attraction and love for these exercises that the children are specially sensitive and easily notice these mistakes. Also, in these exercises, as in the sensorial exercises, the child's attention is strongly attracted, so that we have been able to establish, we might say, the work adapted to children of that age. This work, one might say, is a work of conserving. It is not the work of the producer. They conserve those things which already exist. They clean the floor, the rugs, the furniture. They adjust the things in the room. They set a clean table

SAN FRANCISCO (PPIE)

They wash the dishes, dress and undress themselves. If we consider carefully, there are two kinds of work in the world. The work which produces and the work which conserves (what is) already produced.

The productive work requires greater organization of the intelligence. Conserving objects requires more modest work. In fact, we think the work of the workman is much more noble than the work of the man who uses it afterwards. The workman, for instance, who cuts the material or the carpenter who makes a chair is superior to the one who simply dusts the chair. Is not the dressmaker, for instance, who makes the dress a little bit different from the maid who brushes it and is not the person who weaves beautiful cloth better than the person who wears it? The one who produces does a different thing from the one who conserves those things already produced. This is the difference between the workman and the servant.

Now, there is a way of working which does not require a great organization of the intelligence and it is the work of conserving. This is work which has shown itself to be adapted to little children. It is also work which gives more satisfaction to the eye because immediately they bring order with little effort. This kind of work is little considered either in education or in practical life. When we think of putting manual work into education, we immediately think of having a product. The difficulty would arise when we believe that error would be shown. If a little child were to do productive work before he had this organization, there would be nothing but errors without any form. If a child does productive work at this age, he does not make anything but monstrous mistakes because his intelligence and muscles are not yet adapted to do anything of use. In the midst of monstrosity, the error does not exist because it is nothing but error. The whole thing is a mistake. But when, on the other hand, it concerns conserving a thing, there is already a form because it is already constructed and the error or mistake stands out as something different. A chair that falls, for instance, is still a chair; it has the form of a chair and the child can carry it and correct the error by putting the chair back in place. Whereas, if he had had the carpentry (to do), he would have to put all these pieces in form. When the child drops a glass and breaks it, he sees that

CALIFORNIA LECTURES

the other glasses have their form and that there has been a mistake and so on. We give him an environment already made and in this environment the child sees his mistakes and corrects them.

Now, this work is adapted to the child because it is easy and because it lends itself to this fact of revealing the mistakes or errors. But this work also has another importance. It is light work which does not require a great strain or effort and yet, at the same time, requires the whole activity (of the child). It organizes without consuming and, in this way, it is a real help in the organization of the (child's) inner life. This idea is not new because it has always been applied by those men who are living a spiritual life in all religions. All those who live a religious or spiritual life do, as a rule, these exercises of practical life and these exercises are a help to the inner order. They help the inner order. They are an exercise of order.

The monks who meditate in India, for instance, always do this form of exercise. They take care of their own rooms, clean the house and work in the fields. So these spiritual people do these exercises of practical life as those hygienic people today do these exercises to wake up the muscles which have been asleep. These hygienic exercises are the stretching out of the bones and muscles of the body which have been asleep and have been contracted all night; (this hygienic exercise) prepares the members to move. The exercises of practical life are the easy simple exercises of the intelligence which is waking up and preparing itself in the movement for the big work of the day. It is strange how all spiritual and religious men in all ages have begun their day in that way, with prayer and exercises of practical life. So also the child who is beginning to order his life has a great tendency to these exercises of practical life. If you want to try this experiment, do so. Instead of stretching your muscles with these gymnasium exercises, do it by doing something towards the making up of your own room. Your production should be greater in your ordinary work and also in your intellectual work for the psychic hygiene.

One who has a great deal of studying to do, for example, who is going to have examinations, would find that if he did this work, the mind would work better. It is a conserving of the intelligence and it helps the intelligence as some simple little

SAN FRANCISCO (PPIE)

exercise might help the man who is going into some large thought. These exercises of practical life are exercises of the intelligence. They are light exercises and give order to the intelligence. They start it and give it the impulse for greater work. These little gymnasium exercises of the intelligence can be compared to those similar exercises which some men do who are going to make a great effort in some form of sport. It is not said that man should do these things or go right into them because of that, but first, they do these exercises leading up to the great event and it is thus also for the intelligence. So there is a hygienic part which we can consider. For the adult man, this little exercise is full of thought and it really prepares for meditation.

When we arise in the morning, (we) pull up the shade, let in the light, begin to put our room in order (and) we have many thoughts. We begin to meditate and think. There comes a passion or great love for these little deeds. The monk feels this who takes care of his own cell. He knows how sweet it is to do this little work of conserving. Thus, in the child, this work has another very great importance because it makes him independent of the adult. This child, who is in our hands like a doll, is a slave and can do nothing without us. We wash him; we dress him; we make him sit down; we lift him up; we feed him; we brush his hair; we clean his nose. When he goes walking, we take him by the hand. If we want to place him in a certain spot, we put the chair there. If we dress him, we put on his hat. This child does not exist as a free human being. Where is his liberty? In what moment of his life is he a free being? This is so much more evident if he has not within himself a great passion for the doing of these (practical) things.

Imagine what would happen to us, if we found ourselves in his condition. As soon as we awoke, what would we do but cry and have somebody come and take us up out of bed. We would find ourselves in the position of (a) paralytic, people who need to have somebody to lift them. On the other hand, if we imagine ourselves as we are, we would quietly, peacefully and happily put on our coat, (but, then, as a child,) somebody should come upon us, and lightly, in great haste, (would) put (our coat) on, drag us out of the door. The moral is that there is a difference between the consciousness of the child who is

CALIFORNIA LECTURES

served and the one who serves himself. The child who frees himself from the service of others is not only a child who can dress himself and wash himself, but he has the soul of a different man. In fact, the child does not only show a great pleasure in the doing of these things, but he shows a horror of being helped.

There was a little French girl in my school in Rome who was dressed very rationally by her mother because the mother had the child wear little gaiters buttoned up to the knee. The first thing the child did when she came to the school was to unbutton these gaiters and put them to one side. When the nurse came to take the child home, she wanted to button the gaiters, but the child defended herself strongly. Sitting on the floor, she struggled with the gaiters and the nurse until she buttoned them herself. Here in this class in the Exposition, a lady went into the booth and was putting a chair in place. The child went up to the lady and said, 'Leave that chair alone; is not this our room?' They come to feel that the property is not in the position, but being able to work themselves and they develop accordingly and defend as their own property the power to work. In fact, they are defending their inner personality. They feel the integrity of their own person and they are really taking a step forwards in the evolution of life. It is a great step. One might say, it is the third step because the first step of independence is that of being born; the second step is that of no longer needing maternal milk but having many different ways of nourishment; the third step is the liberating of oneself from the necessity of the help of others. This one (we might call) the weaning of the soul.

This child who is like an appendix, something that is attached to the adult, becomes liberated and independent. This gives a very apparent pleasure to the child. In fact, what is necessary for the child is to do all those small exercises necessary for development and that is what the child feels the need of. If we do things for him, we prevent him from growing. Then there comes a real battle between the adult and the child. The child is trying to accomplish those things which are necessary for his development and the adult prevents him. The adult tends to hold the child in slavery. I repeat here an episode which to me seems very eloquent of a child whom I saw

SAN FRANCISCO (PPIE)

in the garden at home. This child wanted to fill a little pail which he had with (sand) and he was taking everything for his pail. Evidently, the nurse had to go to dinner because it was the middle of the day and then the nurse filled the pail with sand, put it in the child's basket and carried both away. The child cried terribly. He did not want the sand in the pail, but he wanted the exercise of putting it there. He wanted to feel the joy of doing something by himself. His end was his own development and liberation; his means was that little pail full of sand.

The same little drama comes in the whole life of the child. The things which he can accomplish working by himself have the purpose of developing him. They have not the purpose of accomplishing that external thing. It is not, for instance, that the child specially enjoys having his hair neat, as it would be enjoyable for a lady to have her hair dressed beautifully for a ball, but his joy is the combing of his hair himself; it is the act of doing it. So much so, that if somebody does the child's hair, the child cries; but if he does it for himself, he is very happy. His purpose is not to be clean, but to wash himself; when people wash him, he screams; but when he washes himself, he is very happy. One of the observations which has been made in this school at the Exposition is the number of times the children wash themselves. In one morning, one of the children washed himself seven times and yet he was not even dirty. Probably that same child is the one that cries when his mother goes to wash him. He objects. One who observed this probably thought that the child in going on further would take a joy in going on further; that was the hope of the mothers when their children came to our school. The mothers would say, 'We are so happy with the progress of our children, but they use up so much soap'.

It has happened that little children of two and a half years of age wanted to put on their bonnets by themselves; they defended themselves against the person who wanted to help them and there was one child who put on his bonnet in such a way that the strings hung out in front. It was impossible to put the bonnet on straight because the child defended himself so and he had to come to putting it on straight by himself. This heroic defense of the child against the adult is a sign of the

CALIFORNIA LECTURES

path that he is following towards liberation. We see the revelation of a picture of the Son of Man. That little child who for the smallest error does so many, many exercises of perfecting himself (that) he immediately takes the consciousness of his own liberty and individuality. His anxiety is to free himself from the help of the adult. We could say that we are assisting or watching the natural steps of the human soul. The child who advances towards perfection has an instinct and he immediately goes in search of liberty. Outside of these two ways of marking perfection and liberty, we will find no greater joy and no greater serenity than that which we contemplate in this case.

SAN FRANCISCO (PPIE)

Practical life exercises and the psychic development of the child

Lecture 19: 17 September 1915

The child also chooses exercises of practical life and the first coordination of movements begins in these exercises. The child is alone and absorbed in the work of these exercises. By 'alone' I mean he works by himself in the same way as he does when choosing and working with objects for the exercise of the senses. He transforms himself in these exercises little by little, as in repeating the sense exercises over and over. This is the way a discomposed person who was disorderly in his movements becomes composed and master of his movements. He obtains control of himself. Sometimes a very big, apparently coarse work of practical life will become the door of our hope through which that disorderly person may become orderly.

A child who seemed like an ungovernable beast, for example, was in my San Lorenzo school. One morning, I found this boy trying to break a table and making a great deal of noise. The teacher was desperate because it seemed to her that this was the height of disorder. I said, 'Oh, we had found the way'. This was an intelligent exercise because the child was placing the table. We had hope and, in that way, the child began to work and became orderly. The finest exercise the teacher has to do is to be able to distinguish between the disorderly acts which have no purpose and those acts which have an intelligent purpose. When an act has an intelligent purpose, whatever the act, it may be the beginning of perfection or the process of perfecting.

Saeglund¹ tells an interesting anecdote in regard to this. He was the educator of a rich, but deficient child who belonged to one of the noble families of France. This child moved in such a disorderly way that he broke everything and was very destructive. Saeglund tried without success to teach him various intelligent acts, one of which (being) shooting with a bow and arrow. Once he found this child with a little toy gun shooting at the heads of his ancestors in the portraits which were (displayed) in the gallery. His parents were at the height of desperation because up to that point the child had broken nothing

CALIFORNIA LECTURES

precious. Saeglund was most enthusiastic, saying, 'O, how fortunate; let all the pictures of the ancestors die as long as the child becomes intelligent'. He saw in these (shootings) an act of intelligence and, in fact, little by little, the child began to do something and to develop his intelligence. So, when we are treating children who are very disorderly or wild, any act that shows intelligence is like the dawn of hope.

Our job is to prepare the favorable or right environment, where the child is able to exercise himself intelligently and in an orderly way, where he finds the means to occupy himself. We suggest special furniture and special cupboards for this, all low, so that the child's hand can reach them. They need sufficient cupboard space to hold all the objects necessary for their work. The children become accustomed to this new world which is made for them because generally children live amongst objects which are not adapted to them. Usually, objects are as though they were in Paradise but (they are) unobtainable to the children. Consider one small detail, for instance: the hooks in a school are often very high. That alone shows that the teacher takes the child's things off and hangs them up. Children in our schools, however, become accustomed to putting things away because the hooks are (within) reach of their hands. Naturally, all this low furniture is not adapted to us. So, being in the children's environment, we might make the mistake of putting a glass of water, or a child's clothes on a high piece of furniture or in a place too high for the child, but within our reach.

We must pay attention to this fact: it is necessary (that) the child can reach things when putting them away in such a place. This situation, for instance, occurred in our little school here. One of the children went up to Miss Parkhurst, the teacher, and said, 'Listen, I want to tell you something. The glasses should not be put up there because, if they are put there, we cannot reach them. This is the place for the glasses'. The teacher had put the glasses where it came most natural to her. These little details serve to provoke order because they are part of the environment, so, we allow children to exercise in this way for a time until finally they achieve muscular order. I repeat the fact that these exercises correspond to the sensorial exercises from which the child gains something by

SAN FRANCISCO (PPIE)

doing. When doing these things, they acquire greater acuteness of the senses and a greater muscular order. Upon this basis of exercise, which in itself brings perfection, we can intervene with lessons. With the other exercises also, you remember, we gave a lesson after the children first exercised by themselves. Many of the lessons which we gave for muscular coordination can be collective lessons. The lessons which we give consist in teaching the children with exactness some fundamental acts or motions.

One of the fundamental movements is that of walking. This is one movement which represents a grade of the child's development. We notice three physiological grades occur in the development of the child: the first tooth, the first word and taking the first step. This is one of the steps of physiological development and it is characteristic of humans. Quadrupeds, birds and animals of all kinds can walk as soon as they are born. Humans, however, must first develop without being able to walk. Walking is a difficult act of equilibrium. Quadrupeds have less difficulty than we have in that respect. Humans must find the center of gravity since this upright position is the characteristic position of man.

A few years ago, materialistic ideas were common in science. Scientists said that to explain how man had evolved from animal to man, there was a time when suddenly the animal arose in this way so the transformation of man resulted. All (the rest) follows as the consequence of that. The eyes, which before saw nothing but the earth upon which they were walking, now see the horizon. Then little by little they acquire ideas, the intelligence develops and the brain grows. These two members which we used for walking remain free and so man can work. Such a view no longer exists in the scientific interpretation of evolution, but it serves to remind us of the important fact that man is erect and the upright position is characteristic of man. This shows that walking is very important as a stage in evolution.

No one of the fundamental first movements which we teach the child to give him orderliness is the teaching of walking. Naturally, the child already knows how to walk. He not only knows how to walk, but he has done the exercises of practical life because of which he has had to go back and forth.

CALIFORNIA LECTURES

Therefore, when we speak of giving a lesson, we mean giving a lesson for perfecting the child's walking. We also mean to call the child's attention to his own movements and to make that movement conscious which at first was unconscious, leading his attention to the most minute analysis of these movements until the child possesses them of his own will and he knows them and directs them.

We all know walking but who knows with how many defects we walk? The method of walking shows to a great extent the class to which we belong. One can see, for instance, the difference between an aristocrat and a peasant from quite a distance by the way each walks. We all walk without thinking of it. One hears an attractive, smiling person come into a room this way [*demonstration by Dr. Montessori*]. People walk with their feet this way, others this way, so when one says 'walking', one does not describe all the variations. The first thing is to walk giving as much lightness to the body as possible so that one makes as little noise as possible. This is enjoyable and becomes a pleasure. When the children have been walking backwards and forwards without ever thinking about how they walk, then they do it consciously and try to do it without any noise; it is a very interesting attempt. They try to make as little noise as possible, first one person alone, but then all together. When one hears a discreet noise and immediately this is noticed, they become conscious of being imperfect people and each one thinks of perfecting himself. It is a pretty sight to see how the child enters into this idea and tries to walk as quietly as possible.

Children have nails in their shoes and heavy soles and heels and shoes that are too big for them. One sees them make a really touching effort not to make any noise. Little by little this group of people, who at first made a noise in walking, walk more and more softly until, at last, one does not hear them and one thinks that they have left. A more difficult thing to do is to walk not in a free place, but to walk in and out among chairs and so let us walk in and out amongst the chairs without making any noise. When this is said, then there is double attention. There is an intensity to the whole body so that it will not be too heavy and an attention to the objects which are near so as not to touch them. So here is a detail in particular not to touch the objects in walking. This can be an exercise in itself.

SAN FRANCISCO (PPIE)

I walk around this chair at a little distance. Then I come ever nearer and those come ever nearer to it without ever touching it. So you see how much attention is needed so that the feet will not bump into the chair. It is a conscious study of sense awareness and one's own movement. But the most difficult thing is to walk keeping one's equilibrium balanced in the most difficult position, as, for instance, we walk on (railroad) tracks. If they find any kind of track, they walk on it and this corresponds to the need which they have to exercise their inequilibrium, or of the grace of movements which come from this, as well as learning to walk in putting the feet as nearly as possible one in front of the other. The fact that the feet are one in front of the other brings grace to all of the movements. When one genuflects in this way, for instance, putting one knee near the other, one keeps one's equilibrium. When one puts knees side by side, it is an awkward motion, but if one (knee) is put behind the other it is graceful. It is correct. So to walk in this way is awkward and all of this can come spontaneously.

When you see something in the theater, or a queen coming down stairs, you will understand that she never walks with one foot this way and one foot that way. But you will see that (her feet) go down the stairs with one in front of the other on a straight line. This is all included with the exercise of walking on a line. The children take much time to come to a perfect equilibrium, as they put all their attention on these feet, to direct them on the (line) and then afterwards this fact begins to make it come spontaneously. Then the children begin almost with their eyes closed to feel that position and they may be dreaming with their intelligence (about) some other thing. In fact, then we begin to play the rhythmic marches and the children begin to feel the different rhythms when they no longer have to put their attention on their feet. Next they begin to walk on this line according to this rhythm. Then a definite education begins.

When the child is master of his feet in walking, his attention can be distributed on different movements. Thus, the child can carry a glass of water and hold it in such a way that the water does not spill because if he does not pay attention to the glass, while he watches his feet, the water spills. Then his attention little by little is carried to all of his body, to keeping his feet

CALIFORNIA LECTURES

straight on the line and to holding the glass straight and he becomes conscious of the movements of his whole body. The child becomes very graceful in all of his movements because when he has not a good equilibrium, every motion shows him attentive to equilibrium. They take some object and lose their equilibrium and fail. When one really has one's own equilibrium, it is so much easier to turn to the right and left without losing equilibrium.

The other exercises, I repeat, scarcely compare to this, but that does not mean that one cannot do the other lessons even though they are not of great importance, carrying a chair, for example. Children, in the first exercises, carry chairs, so it is not that we teach the children how to carry a chair, but we teach them to perfect the attitude. So the attention must be attracted to a particular way of carrying the chair. As there are two arms, one can carry a chair in this way, as quietly as possible, so there is a *way* of carrying it. This way of taking the chairs can also be analyzed, and to really analyze, to do one act after another, for instance, this way of taking a chair: take the chair and, at the same time, turn around with the chair, as you are taking it, is not a very graceful movement. It is much more graceful when one analyzes (these) movements. First, I bend over and look at the chair, pick it up, then I turn around and I walk and put it down as perpendicularly as possible; then there comes a more beautiful and graceful movement. So (also) to take the chair and then put it down on the floor without making any noise requires patience.

To teach how to sit down and stand up is also an exercise. Who is there who does not know how to sit down and stand up? Everybody is able to sit down. If I bend over before it is time to sit down, for instance, I make a very unnecessary movement. It is just as useless as if I took a deep breath. Also, if I throw myself down before I have reached the chair, all that is useless and awkward, like the useless or over-effective decoration in clothing is superfluous. Refinement is the simplicity and harmony of motion and so, before sitting down, I place myself in front of the chair, trying to put my feet down in a definite position. Then, when I walk and sit down again, I simply sit down without any unnecessary movements. It is not necessary in order to sit down that we lean forward or backward, nor is it necessary that I

SAN FRANCISCO (PPIE)

bend to one side or the other. I simply sit down or I rise. This is very simple and so amusing to the children. It is a revelation.

All these revelations have importance according to the age of development (of the child). There are so many great revelations but we are not able to see them. In order to be a revelation to us, it must be in accordance with our power. For the child, it is a revelation that his body first moves in a funny, strange way and now he can move it correctly. Then he understands all his movements which at first he did not understand. This is something great that fills his whole mind and heart and it is important. Then the children repeat this exercise in many ways, carrying the chairs very, very quietly without making any noise, replacing them without making any noise. (Then) they sit down and stand up.

Now admitting that the child has started to gain order, simple exercises for coordination, such as the exercises of practical life, also admit that the children get a great love for doing these minute things well. They take a great pleasure in doing all these things well. They place objects and move objects without making any noise. You will immediately see a class of angels. If you admit all these things, you will remain astonished and that would be a revelation for you. The conclusion that one would reach is that these children had become so good. Those who say that, however, put goodness in skeleton and muscles, but, however, our teachers, as I already had occasion to see, did not talk in this way. These words have disappeared spontaneously, without my having had any influence. One of the teachers said, 'O, how naughty these children are!'; then, again, it was said, 'O, how good they have become'. Yet these expressions existed in the schools only a short time ago. In our schools, what all the teachers did a few years ago was to call the child and say, 'Go to the blackboard and write "good" and "bad" and put a line between the two'. The child would look at the class and thus he moved and was put among the bad. He sat quietly and was put amongst the good. Thus, on the spot, they became judges of good and bad. It is the one way of simplifying the moral question.

Whereas our teachers now say, 'These children are disorderly'. By this they meant a psycho-physiological fact. Or, else they say, 'The children are beginning to become orderly',

CALIFORNIA LECTURES

or else, 'The children have become orderly'. This also has the significance of a psycho-physiological fact which is the coordination of the muscles. You see that the teacher has, in this way, made an exercise of practical life. She has taken a brush and she has brushed away a good and bad which did not belong here and so the moral question remains without this dust. It remains more purified from ideas which obscured the mind. The question of whether these are good or bad is not solved. (Such a question) is outside of this. We have distinguished one part which is the muscular order and we have put it to one side of the moral question.

This is similar, for example, to what happens when scientific discoveries come about. In the same way one brushes aside the religious question. When lightning came, for instance, the savages used to say that God was sending a curse. They confused God with lightning. (But,) these were physiological facts. Epidemics were confused with the curse of God. Scientists put all of these in separate classes, the physical facts and the meteorological facts. These two classes are separate. The fact that a person has been struck by lightning does not mean that he is an atheist. These are two different ideas. The discovery of electricity does not strike the Eternal Faith but it separates the two and it removes ignorance from faith. So the act of ordering one's questions of morals purifies the moral idea. It removes something physiological from that confusion in which one put good and bad, right and wrong. This can be very amusing. One can go on infinitely teaching the children the analysis of movements.

These can be taught, for example, with those objects with which one teaches the child the exercises of practical life. One buttons a jacket. This is an awkward way of buttoning. That means I do two things at the same time [*Dr. Montessori demonstrates with the button frame*]. The awkward way is to put the jacket in place and button it at the same time. But the graceful and correct way is to put the jacket in place and then proceed to button it carefully. You will never find that a graceful person does the two things at the same time; she adjusts the jacket first and then buttons it. Also, a good maid does this. She first puts the different parts in place and then she takes the button over to one side so that it will enter into the hole

SAN FRANCISCO (PPIE)

Put it in place first and then it goes easily. [*Dr. Montessori demonstrates with the button frame*] To unbutton the jacket, we first unbutton the button, then open the coat. This we find is a more saving way of keeping clothes. That is why a peasant always has his clothes pulled in a disorderly way, but an aristocrat has his clothes all straightened. There is no trace left of the movement and so it is not only an economy of movements but also of the objects.

The same may be said also of furniture. There are neither doors nor cupboards with doors in our schools. But, to take a door, for example, and slam it or to take the door by the wood, instead of by the knob, that is what makes the door dirty. The door should remain untouched because there is a door knob. I use the door knob and as the door knob is touched with the hand, I do not touch the door with a dirty hand. Nor do I kick it shut. Now, when one opens the door with the hand, generally one does it in this way [*Dr. Montessori demonstrates*]. While one is opening it, one pulls the door at the same time and in the same way. When one is unlocking a little case, one pulls it at the same time as one turns the key. Generally, if before one unlocks, one pulls, then little by little, the locks become loosened and also the door knobs begin to get out of order. One makes the remark that, 'This door does not shut well'. The reason is that it was pulled before it was opened. It is so simple to turn the key and then to open the door. First, turn the key and, when the key has finished turning, pull out the door. If one pulls it out in such a way that it remains horizontal, when it has come out as far as we wish horizontally, (then) one leaves go and it drops lightly. It is not harmed and the furniture remains unharmed; the locks remain perfect and this is economy.

This care is not only economy, but there is grace in the movements. An aristocratic lady would pull it out generally in this way, but a peasant would pull it out awkwardly and then say, 'O, the lock is broken'. This fact of conserving objects today belongs only to the rich, but it should be given to the poor because it is an economic fact². We are so miserly with the poor. We always have the excuse that things cost too much and so we even deny them things that are an economy. No one could say that it costs very much to teach this exercise or these things to the children. There are the chairs, the doors. Everything is

CALIFORNIA LECTURES

there ready for us to teach them. It is not a question of spending, but a question of not destroying. It is a question of fine education, which, up to today, has been the privilege of the aristocratic class.

Where things are done together in all the movements, where there is not the analysis of the movements, movements are awkward. I want to take a car, for example, and, at the same time, I want to speak to this person. This is awkward and the movement is awkward. A refined person would never do it. If I speak to this person, I speak to him. If I want to go to the car and talk with this person, I ask him to walk with me, instead of walking behind me. One does not have to stop because she is talking directly to me. She walks with me. She does not have to give up something, but it simply means that one is an awkward way and one is a graceful way. When one enters a carriage, one does not put the foot out before the carriage is stopped. At the time of stepping out of a carriage, one might be greeting a friend. The more things one does at the same time, the more awkward one is. Either do the thing before or after the main movement is completed. I bow first and then I stand up. I get out of the carriage; then I go towards the friend; one thing at a time.

To know how to distinguish is a fact of intelligence. Take the bow, for instance. I see this friend and I bow to him from afar. While I am walking, I cannot move my head. I go up close and then I give him my hand. It is simple to distinguish. One notices this in Greek dancing. There is a simplicity of motion. They try to describe things with one movement and people tell me that I do not know this. This kind of distinction is true, also, in Japanese dancing and they try to make only the necessary movements when they want to accomplish a purpose. To perfect and simplify all movements brings the most sublime, aesthetic beauty, so much so that the person who moves beautifully becomes a spectacle because it is something that we go to see in order that we may have pleasure. This is the modern direction of dancing in the theater. Modern dancing has this for a basis, natural movements perfected. There are no longer pirouettes in the ballets, but we see a person who moves in a sublime way so that we can compare them with a statue of Phidias, the sculptor. It would be a perfect picture.

SAN FRANCISCO (PPIE)

1. Saeglund was an Austrian teacher, called an *aio* in Italian, an intellectual baby-sitter, or, more politely a live-in tutor, typical in those days in Northern Italy.

2. These comments of Montessori can be understood only in the light of her history. The Mayor of Rome begged her to start a *Casa dei Bambini* in what could only be called public housing for the poor of Rome and administered by the city. The Mayor had heard what Montessori had accomplished in her intern year at the psychiatric ward at the University of Rome hospital. She succeeded on condition that the Mayor would allow her to renovate the first floor of the public housing as a *Casa dei Bambini* and that she would have exclusive control over the *Casa*. One of the innovations she demanded – this being at the beginning of the twentieth century! – was that the furniture be 'child'-height furniture. This was unheard of, but the Mayor capitulated. The results are history and include the fact that the poor performed beyond expectations that any of the 'nobility' had anticipated.

CALIFORNIA LECTURES

The human senses and the psychic development of the child

Lecture 20: 20 September 1915

It is known that we have five senses: sight, hearing, touch (of the tactile sense), taste and smell. (We distinguish forms and colors with sight); we call the sense with which we distinguish colors the chromatic sense. (We distinguish sounds and tones), or noise of any sort with the sense of hearing. (When there is the tactile) or, cutaneous sense, we say it is plural because there are many sensations. The tactile sense is that with which one distinguishes difference in surfaces, rough or smooth. The barbaric sense is the one which we might call the sense of pleasure. The thermic sense is that sense which distinguishes heat and cold. The stereognostic sense is the sense by which the sense of touch recognizes forms. This sense is considered as a combination of two senses, the tactile sense and that which is called the muscular sense which feels movements. When we move a muscle, we feel the movement; we remember the movement and we can reproduce it. Then, there is this stereognostic sense which is the combination of these (two senses). When we touch an object, we have the tactile sense and we also have the muscular sense; we feel around the object.

All of these senses could be called intellectual senses because they contribute to give material to the intelligence and it is upon this material that the intelligence constructs itself. Then there are senses of taste and of smell which have a great importance for vegetative life. One might say that these latter serve well for eating and the others serve well for thinking. All these senses have separate organs, as is well known. The two intellectual senses, the principal ones, are the visual and the auditory. But the tactile sense also has great importance from the intellectual standpoint, although it has not been considered very much in education of normal children. But it has been very much considered in education of abnormal children, the blind, for example. Then one knows that through these senses the intellectual doors are open.

There is a prejudice that blind people must have a particularly tactile sensibility because they do not possess other

SAN FRANCISCO (PPIE)

senses. We must remember that blind children are often normal children who have lost their sight after birth and who have all of their other senses, except sight, equal to normal children. (So), they are the same as normal children. Only they are children who have exercised their tactile sense, whereas the children who see do not use it. (Children who see) do not exercise it in order to take the intellectual material. If the normal child exercised the tactile sense, as the blind do, he would have this extra door. We see that the child instinctively uses this sense for his conquests of the intelligence. When he touches everything, he is trying to gain a knowledge of the object through the touch because perception by means of the other senses is not yet perfect in the child.

The eye of the child, for instance up to eight or nine years of age, does not function normally, or at least not like that of older people. It does not have its complete function and so much () complete is the function at the age of three years. Besides, the sensations of sight are not only related to the sense organ itself, but to an experience which we must gain. Perspective (and) the distance between objects, for instance, are all things which we must gain through experience and touch helps children very much to make their (visual)¹ perceptions precise. Without anybody ever having taught it to (the child), one might say, he seems to know that he still has this imperfection, but that he has another sense which he can use in order to compensate for this (imperfection). He uses it to help the other sense organ and so he helps his visual experience to be exact. It is quite touching when we think that the child seems to know all these things, this lack and the way he can make up for it. At least, he acts as though he knew and he would succeed victoriously in his efforts, if we did not prevent him. So much more quietly he would succeed, if we did not prevent him. When we separate his tactile efforts from his visual perceptions, we prevent all that fusion which nature would permit to facilitate the development of the intelligence.

So, when we say to the child, 'Don't touch', it is almost as though we said, 'Don't see'. It is as though we said to him, 'Keep those illusions which you have when you see imperfectly'. There is doubtless in nature a collaboration or cooperation of the senses in the taking of the material from the external

CALIFORNIA LECTURES

world. To see, to hear, to see and to touch, for instance, make the comprehension clearer. Thus, there is a separation of all the sensations and a collaboration. There is a separation in so far as the eyes are very distinct from the ears; the ears are quite distinct from the skin. But there is a collaboration in as much as the things are taken with different senses together to help the intelligence. The child who sees and touches, for instance, has a clearer idea of a thing. If, when speaking to you, I could show you the things of which I am speaking, I could make you understand more clearly. If you are with a sympathetic person and you hold their hand, see a beautiful view and hear beautiful music at the same time, you are at the height of happenings and there is a distinction and a collaboration of the senses. These two are not contradictory to each other, the distinction and the collaboration. It is somewhat like developing the separate individualities and then joining them to make a society. But the first fundamental thing is that there is this separation because, if there were not this separation, there would not be this sensation. There would be nothing.

If one could imagine a fusion of all the sensations of sight and hearing, and the others, in one organ, the separate sensations would not exist. One would not have these sensations. There needs to be this separation. It is this separation which permits distinction of sensations. One might say that (the distinction of sensations) is in relation to the existence of this separation. When they exist and become perfected, then these sensations join, (yet) intelligence cannot come from the confusion of sensations, but from the association of sensations. There may be a distinct association as there must be a separation and a distinction. This separation of the senses and the anatomical construction of the organs, not only the eye and the ear, but the different construction of the eye and the ear is related to the definite ability to take certain stimuli from the environment.

You know that in the theory of sensation there is a theory of vibration, and that there are special vibrations for light and different vibrations for sounds. These vibrations are always in their environment, so the different organs are made in such a way that one can receive the vibrations of light, for instance, the eye; another, on the other hand, can receive the vibrations

SAN FRANCISCO (PPIE)

of sound, like the ear. Because of the fact that they are separated and constructed differently, these senses or organs receive different kinds of sensations. Then, they work together so that the intelligence can develop from all. It is one of the most beautiful examples of the perfecting and developing of the individual. Then, the joining for the same higher purpose, such as the intelligence, completes it.

One of the most beautiful examples in nature of separate formations and separate perfecting for the purpose of uniting and so reaching of the higher plane of the intelligence is the division of work. Whoever studies physiology knows how wonderfully constructed those senses or organs are. But the thing which impresses one is that these wonderful organs cannot receive all that is in the environment. They even limit extremely what is in the environment. It is not because we have eyes and ears (that) we can see and hear all. On the contrary, (it is the fact that) we have these eyes and ears (that) sets a limitation to our possibility. Let us suppose that the vibrations were inherent as they are in the environment. Suppose that we could measure these vibrations into octaves, as we divide them in musical vibrations. Given that it is this way that we could measure the vibrations, the eye is capable only of receiving one octave of these vibrations and the ear seven octaves, whereas the vibrations are infinite in octaves. Therefore, our senses serve to limit extremely the external world. We do not see outside (the) world, but we see what is within our possibility.

We know that there are so many colors beyond violet and red, but we cannot see them, just as though they did not exist. Thus, there are so many musical octaves with angelic music (which) we cannot hear. There are, for instance, ants who are provided with hearing, but if Wagnerian music is played, they cannot hear it, or, they do not hear it; they are perfectly indifferent. One can say that the living creature has as a characteristic (these) limitations and all that we admire as beautiful are its limits.

It is known, for instance, that the beauty of the body is given by limits. It is limits that make beauty. If my nose, for instance, instead of staying within its limits, became as large as life, I would not be staying within my limits. I would be

CALIFORNIA LECTURES

going beyond my limits. Limits are important (so) that functions may occur within them. We cannot think of a function abstractly outside its limits as a beautiful thing, except definitively within its own limits. When the organs prepare themselves to receive these vibrations, they are not indifferent, as might be the water which refracts the light, or a mirror which reflects (an image), or a wall which gives back the echo of a sound, but there is an activity. The cells at the bottom of the eye, for instance, strain themselves to receive the light and very, very fine muscles in the lens, which we see, contract. The cords like those of a long harp which are coiled up inside of the ear stretch out and vibrate when they receive the sound. This limitation and the fact of the preparation of the organ to receive (vibrations) are the fundamental facts. So we cannot say that the light falls upon our eyes, but we receive it. We cannot receive all, only what is within our limits. Thus, our ear moves to receive, but can receive only within its limits. We must have a similar conception in thinking of what the intelligence can receive.

Passing into another field, what comes about through the phenomenon of attention is something parallel and similar to what comes about through the senses. We cannot pay attention to all things at the same time and we cannot pay attention indifferently. Our capacity of paying attention is united with our inner organs and with our inner individuality. We cannot pay attention indifferently, but there must be an inner preparation, an activity, in order to pay attention. We are, in a certain way, not like a mirror upon which things are reflected, but an active living being which must take, but in taking (each) has limits which correspond to its inner individuality.

When the child begins or fixes his attention upon an object, it is (due to the fact that) this object corresponds to the needs of his inner personality. It is because of this that he can remain so long at one object. We can pay attention particularly to those things of which we have need, or, to those things which correspond to the disposition of our inner life. It is not that the whole external world is reflected within us, but it is that we go and choose things according to our needs or still better, according to our possibilities. You hear, for instance, so many people

SAN FRANCISCO (PPIE)

who see so many different parts. You are here before my eyes. In reality, I can see any particulars. I can see all the minute parts of how a hat and how a shoe are made. I have the possibility but I do not see them. Not that my eyes are limited in such a way that I do not see them, but that still further within, there is a higher limitation. So I need only take the little that my eyes are able to take, but I have taken only that which my senses can choose in the immensity of all that is created.

But I have still another limitation: what my intelligence chooses in this field is already chosen by the senses. The limits of the senses are much greater. I can see all the things here mentally with my senses. I must admit that although I have come here so many days, I could not describe any one of these things. Why have I noticed certain things rather than others? It is certain that I have noticed those things which interest me. There may be amongst you persons whom I know better than others; yet you are all here for an hour or more, perhaps too much for you, before my eyes. There may be two people who take a walk in the country. One person may be struck by the silence and the sound of a cricket; another may be struck by the darkness and a ray of light which comes from the moon. Both of them have the same possibility of receiving identical vibrations, but their attention makes a choice amongst all these things. One pays attention rather to the things which he sees and the other rather to the things which he hears. Between these two people, it is not an external difference but, nevertheless, there is a real difference between them, a clear difference. They have a difference of choice. It is not because of the senses. It is more because of their needs within. In order to reach this, we must all make this higher and greater choice amongst things.

Now, the attention which one pays to things is not passive, but corresponds to an activity and an inner meaning. We do not take the world as it is, but as we are. It is not a picture of the world that is within us, (rather) it is our own picture. It is not the world that is in us, but it is what we have chosen, and the possibility of choice is a natural fact. We cannot arrange it so that a person who is struck by one thing is struck by another thing instead. This is a natural fact. We must consider this with the same reality and the same objectivity as we consider all

CALIFORNIA LECTURES

natural facts so that (the) person who stands before us has not only his eyes, nose and senses, but has his inner capacities, his mysterious and wonderful capacities of choice.²

If we consider the child as a being to be educated and if we know that in order to educate the child we must do it so that he will pay attention to things; if then we want to educate the child and we know that in order to be educated, he must pay attention to things, this fact that the attention is active should be present before us. We, (therefore,) cannot arrange it with the child that he will pay attention to what we want, but that he can pay attention only to what he can, to what corresponds to his nature because this attention of his is a natural fact which is in relation to his activities, activities which he can reveal to us, but which we cannot divine. It is only when the child can exercise his natural attention that he can develop his intelligence and his intelligence will not take chaos from the environment, but his intelligence must choose and follow the line of its formation.

One might say that this being within us is a living being which chooses from its external environment, as the body which chooses with its sense is living. This capacity of imitation is the capacity of giving a form to what is forming within and it is in actively choosing that the individuality forms within. This individuality has direction in its formation. It is not just formed by chance. This criterion fundamentally changes the principles of education because one generally does not pay attention to the natural fact of the activity of the attention, but we think that it is our power to attract the children's attention unto anything that we want. Therefore, (we) give them the ideas which we wish (them) to have and give them the form which we wish (them to have). It is we who wish to choose for them and create an individuality as we think best. Spencer, for example, says that our mind is formed by experiences and that, therefore, making the child go through certain experiences, we form the mind as we wish.

It is a common idea that the child's mind is like a piece of wax upon which we can carve what we wish. We can design what we wish on this piece of wax because it is soft and has no form. We can give it the form we wish. Generally, we consider the man as formative only in his body; we consider that the other part, the

SAN FRANCISCO (PPIE)

the mind, is what we can form, without realizing that we leave to God the creation which we consider least high and that we keep for ourselves the creation of the higher part. Our mind can be subject to that creative illusion. We easily think that we are creators.

When the materialistic principle, for example, was at the height of its development in science, there was a great creative hope because they discovered that all protoplasm, that is the material which is in all living cells, and the chemicals with which they had learned to construct material by synthetic chemistry, that (these scientists) could also construct this protoplasm. As the egg of man is nothing but a little protoplasm without any inner form, (these) chemists thought that in greatly perfecting these manipulations they would be able to construct with only protoplasm in general, the protoplasm of the egg of man. Hope (then) flowered to the point that they thought that some day (these) chemists would be able to create man on their tables. Then (they called) this man of the future an *homunculus*, a sort of disparagement to distinguish him from other (men). But there was one time at which people really put this problem to themselves and there were conversations in public on this subject. They said, 'What will happen in the future when scientists will have made such progress?' Love will have to be abolished and they said, 'O, do not be terrified, because even if man can be made by chemistry, they will always choose the old method'. One little thing had escaped (these scientists). They had forgotten one little thing. They had seen only the protoplasm which has no appearance. There was nothing less than that activity to form man, that activity which has no appearance when one looks at the egg, but which exists as a mystery. This life which comes by itself from nothing and which could not be put there by chemistry, this was the one thing they had not thought of and, then, everyone laughed at the others.

Today, we have the same conception for spiritual man. We are all persuaded that we can construct Spirit without thinking that this spirituality is something higher and more difficult than that of the body.

1. Wherever Adelia Pyle types 'visional', I have placed 'visual'.

CALIFORNIA LECTURES

2. This view of Montessori accounts for her continued insistence that the purpose of the teacher is 'to prepare the environment'. She has such respect for the ability of the children to choose that she seeks to maximize their choices to correspond to their infinite 'inner need'. Again, her Catholic view is the basis for her educational philosophy, namely, that the child is created by God and merely loaned to parents and teachers whose job it is to respect the mysterious possibilities of each child and to serve these varied needs.

SAN FRANCISCO (PPIE)

Fixing attention and the child's psychic development

Lecture 21: 22 September 1915

The way of attracting attention is the great preoccupation of all those who educate because one does not receive anything within, if one does not fix the attention upon something. There are means of attracting attention and means of holding it. These are two different things. To attract attention, some stimulus is necessary; to hold it, on the other hand, an intellectual stimulus is necessary, something (on which) the intelligence may work. Thus, for example, if a teacher in school wants to attract the (child's) attention, and does this [*Dr. Montessori taps on the desk with a pencil*], that is a stimulus which serves to attract the attention. When, however, she wants to hold (the child's) attention, she must not simply attract the sense in this way (tapping on the table), but she must try to hold the intelligence of the child.

The difficulty does not lie in attracting the (child's) attention; the difficulty is to hold it. We find all the children will pay attention when one does this [*Dr. Montessori claps her hands*], but it is hard to hold a child's attention, if it is a prolonged argument. As a result of this, those who try to hold a child's attention interpolate stimuli. If they are giving a long talk, they put in something to attract the (listener's) attention. The exquisite art of the teacher is to know how to pick up or catch again that attention which every once in a while has fallen away, or wandered. The phenomenon which is verified is that this attention, which can instantly be attracted, little by little becomes vague and leaves. (This is the reason) the teacher must try to make herself, what some call, interesting.

The teacher has two means of making herself interesting: one is to have something complex and complete, to give something definite so that the intelligence has some definite line to follow. The other way is every once in a while to catch up the attention which is leaving and, for this purpose, telling a story is a teacher's favorite means. In this way, (the teacher) has something complete to give. It is a complex and complete thing and the interest can be held in the beginning and in the end.

CALIFORNIA LECTURES

There is a purpose in the discourse of the teacher. She has a purpose.

A teacher, for example, wants to make a distinction between a noise and a sound. She wants to hold the children's attention at length on this argument. She does it in this way: she begins a story. She says, 'Dear children, as I was coming to school this morning, I met a friend and I was so glad to see him because I had not seen him for such a long time'. The children pay attention to the story and it goes on for a great length of time. The teacher had arranged with a friend to come and knock at the door and so one hears this noise and then (the teacher) says, 'Oh, children, what has happened?' This is a way of attracting the attention of the children which was escaping. 'Oh, what has happened, I cannot remember anything that I was saying'.

On the table, there is a mandolin which is all covered up with some material and I say, 'Oh, I cannot go on with my story any longer; I cannot remember what I was saying'. I take this child and say, 'Oh, how cunning it is. Would you like to see it? I want to talk with it. Oh, I think it is talking'. I put my hands underneath the covering and touch a string. It says, 'Papa'. All the children say, 'Oh, it is a mandolin'. The teacher says, 'Oh, what can it be; let's open it; oh, it is a mandolin'. She then plays it. This is a sound that she is playing and the other was a noise. This is the difference between a sound and a noise. I give this lesson because it was given at a kind of examination in Rome and it took a prize because it held the attention (of the children).

Now, what is called a vivacious lesson, for example, is a lesson which has the possibility of recalling the attention every now and then. This is the art of the teacher. We might say this effort of the teacher to which the torment or suffering of the pupils corresponds comes about because it is very difficult or, we might say, impossible to hold the child's attention at great length. (The reason is that in order for the child's attention to remain fixed, even) in order that it may come about, it is necessary that the intelligence performs a work. ('Intelligence' here does not mean) that the teacher performs a work using her intelligence, but that the child performs the work with his intelligence. In order that the attention may be fixed, the child himself must act, otherwise it is the teacher who is moving and the child's attention remains motionless.

SAN FRANCISCO (PPIE)

Imagine a person on a bicycle. The person is still the instant he mounts. Then immediately the motion must begin, otherwise he must dismount because to be motionless on the bicycle is an impossibility. The teacher puts to herself this problem of riding a bicycle and the children must stay motionless. This is impossible. If the teacher stands near a child in order to make it stay motionless, she must always have her arms about him and she must catch hold of him every once in a while because he will fall. In order that the child may stay for a long time on the bicycle, he must ride and keep on moving. It is useless to try to find the means by which the child may remain motionless; whereas it is very easy to let him ride. When he can remain a long time at some spontaneous work of his own intelligence, it is then that his intelligence can remain fixed for a long time. Thus, when these children do work and repeat it many times, they remain with their attention fixed for a long time. The reason is that the child is accomplishing something with his intelligence, by himself.

Therefore, these stimuli which we give are not (mere) sensorial stimuli, simply attracting the (child's) attention, but they are stimuli which hold the attention with an intellectual task. These stimuli should be interesting to the child. One might say that the object gives itself the same purpose as the teacher. (The object) has the same end as the teacher, that is, to attract the attention, to hold it and to make itself interesting. But what makes the object interesting is the fact that it corresponds to an intellectual need of the child. It is because of this, that the child remains at it. That (the object) corresponds to the need of the child has been shown to us by experience. (These objects) have not been given by caprice, but (each) in itself corresponds to the needs of the child, of interesting the child. It is because of this that we do not need to make objects artificially interesting as the teacher does when she presents an object which she is not sure will be interesting to the child.

Take, for example, those solid metal insets which we give. We do not need to dress them up and walk up and down with them, as though we wished to rock them asleep, to seek to make them interesting. It is sufficient to present them, and then there is something within (the child) which corresponds to them and the attention fixes itself. The reason for this is not

CALIFORNIA LECTURES

in an external art of the teacher, but in an inner fact within the child. One might say that it is a fact of natural life of the child. Therefore, as a foundation or basis, there is something which one might call an instinct. It is the instinct of life which forms the first motor (within the child) and which in itself is a mystery which it is necessary to respect.

Even Dante, although he lived in the twelfth century, has this same principle in the *Divine Comedy*. He speaks of the primitive instincts of the mind, of the innate ideas which are instinctive within us. As in the bee, there is an instinct to make honey. All the works of the intelligence which are natural works of life must take their first roots in instinct. Then this phenomenon of the child remains absorbed for a long time in the work. (The child) begins little by little to construct himself, but he needs to follow the natural paths.

The nutrition of the body also starts from an instinct. The newborn babe has the instinct to suck (the mother's breast for) milk and to remain at this for a long time without anybody having taught him. Thus starts nutrition in man. Although, afterwards, the search for food represents one of the most complex social works of the intelligence. When the teachers in the ordinary school or method want to teach with artifice without taking account of nature, they make a study of the mode or way of proceeding. They give the ideas one after another or, following a logical line, try always to continue to attract or hold the child's attention. One of the most well-known ways for succeeding in this, for example, is that of passing from the known to the unknown because one knows that the unknown things are not interesting, so one must bind the unknown and the known. (They must) do it in such a way that the known will be revived with interest and then from there, one passes to the unknown. Thus, beginning to give a lesson in something unknown (and) new to the child, one begins by talking of something known. One holds the interest and then one brings in the unknown thing. Thus, one goes from step to step in a successive growth of the ideas.

But it is well known that, even in this effort, the teacher does not always succeed in holding the pupil's attention. Let us imagine, for example, that this is not an interesting person and suppose that I am interesting; if I take this young lady and

SAN FRANCISCO (PPIE)

lead her before you and introduce her and make her known to you. (Yet,) because of this, she does not become interesting. Let us suppose that we are two people who are unsympathetic. I am known and the young lady is not known. I enter and try to make myself as pleasant as possible. I smile and introduce the young lady, but we do not become interesting. To be interesting, there must be a sympathy between us. There must be something in you which corresponds to something in us and in this inner meaning of the sympathy, we can become sympathetic. (But,) it is not the fact of knowing each other, or being introduced, that makes one sympathetic.

Thus it is with the ideas we must put into the soul of the child. It is not sufficient that they are presented and that things known introduce something unknown. But it is necessary that these ideas shall correspond to something within the child. Without this (sympathy), we make vain efforts to hold the attention of the child. Our objects, our stimuli also seem to have the same intentions as these teachers, to go from the known to the unknown. They also follow all the other principles that the teachers have of going from the simple to the complex, from the concrete to the abstract. But, (our objects) follow different paths (from the teachers). In the beginning, these stimuli correspond to the needs of the (child's) life. In this first period, these objects present the qualities in the most simple way possible, distinguishing the various qualities, the forms from the colors, dimensions from forms. The qualities of the surfaces in varieties, the tactile sensations from the thermic sensations, these baric and stereognostic sensations, the sounds from noises. These exercises, which the children do, attract their attention to all the single movements and to all these stimuli – it is useless to repeat – the children do not remain motionless, but they move their intelligence. Thus, on these first reactions (to these objects), the whole organism (of the child) is put in motion.

While the child was doing this work of the intelligence, he would have to have the instinct of life to resist all these stimuli. The child was not only having this activity, but precise and clear notions or ideas entered into his mind, clear and distinct ideas. He knows all these things. He knows colors, forms, the dimensions and movements. The ideas have entered into him; the

CALIFORNIA LECTURES

knowledge has entered into him. He is cognizant. It is not only an instinct in him, but by means of this instinct, something known has been established. It is very clear and well known and this *known* [sic] has been established on the foundation of the instinct. After this period, we see that the child lets his attention go to all the objects about him. He is conscious of the color of the sky, of the shape of the windows. He notices the quality of the materials with which people are clothed, that is, he recognizes in all objects what is known to him because there is no object which has not some quality. When the quality is known, every object has something known, although in itself it may represent the unknown. The child passing from this known quality observes all the qualities of the unknown. Thus, he passes from the known to the unknown because of an inner impulse, by means of an inner intelligence. (This) is not slow progress on a line, it is an explosion.

Take those fireworks, for example – this is, perhaps, not a good comparison because there is no artifice here (in the child). One sees something which bursts forth and spreads out in many rays; then this goes on and there is another explosion of rays, and so forth. So here (in the child): there is an explosion and a spreading out of the rays in life, receiving the known, then there is another explosion taking in the unknown. All objects become interesting because of the qualities of the objects which have already aroused the interest (of the child). The child has already been interested in the objects.

The other method of proceeding, on the other hand, is entirely different. One goes with linear contiguity from the known to the unknown. One might say, I would try to make the table interesting and then, other analogous objects (interesting), and so on and on. I (would) proceed to awaken the interest in all the objects, such as furnishing a room. Then I would show one inset and then another and another, until (the child) would pass to the unknown. It (would be) I who shows these objects (to the child) one after another like so many rings in a chain, or, if you will, like that paper which a (magician)¹ places on the table, pulling it out of his sleeve, or (from) his mouth, keeping on pulling it out without end. So that the knowledge is disposed of on a line upon which the teacher works to give little by little another unknown, if there is one.

SAN FRANCISCO (PPIE)

Here (in our method), on the other hand, the form of expression is entirely different. There is an explosive form in which so many things enter into the consciousness of the child, actively working. It is the child himself who becomes interested in things and who notices everything, having the impression of making discoveries continually. It is not the teacher who tries to interest him by making the consciousness of things new to him, but the child goes towards these things spontaneously and notices them as though it were a discovery. This discovery animates him.²

The discovery, which the child makes spontaneously observing an environment (with) this phenomenon of enthusiasm and feeling, represents the taking of the unknown in the external world. In fact, the child has the impression of having made a discovery. Thus, this represents the unknown which becomes the known and the phenomenon is entirely different from when the teacher teaches externally. But in order that this spontaneous phenomenon of interest towards the external may come about, an inner motor force is necessary. It is necessary that the preceding things (the objects) have been founded upon the instinct of life, then little by little constructed upon this (order), comes this successive expansion. Therefore, that the unknown may be of interest, it is not sufficient that it be linked to the known, but it must respond to the instinct primarily. Then, it is a phenomenon of development, instead of a phenomenon of taking in.

With our method, one has the phenomenon of successive development. Other methods have the phenomenon of learning something new. It is very difficult to make this clear. It is the same principle as in the other methods, only it is internal, instead of external. (Here) instead of the interest going simply (and) artificially from the teacher, there must be something within the child. Then all the successive phenomena change into other aspects because, when the teacher teaches from the outside, something difficult takes place in the child. It is a work which is difficult and outside of nature, (so), at most, the child can learn what the teacher teaches. But, on the other hand, in our method, there are phenomena of an entirely different kind because life in this development gives surprises even to us. It has explosions and none of this corresponds at all to the work

CALIFORNIA LECTURES

of the teacher. Not only this, but it does not even correspond to the objects. It corresponds to the development of life which is always richer than we can imagine.

1. Adelia Pyle typed 'like a trick man', but I have rendered it 'magician', aware of the fact that the context indicates Montessori wanted to convey the idea that 'old method' teachers used the *knowns* as 'tricks' to 'trick' the children into learning about the unknown. Thus, Montessori suggests that teachers engage in sleight of hand, more as 'con' artists than as people sincerely interested in the child's learning.

2. I find a decided oriental influence in the thinking of Maria Montessori. This is probably linked to the time she spent in India. She went there in 1939 but was classified as an enemy alien when the Second World War broke out. Happily she was treated well and was subsequently allowed to travel to Ceylon (now Sri Lanka) to give a course of lectures.

Oakland lecture

Biological liberty and the psychic development of the child

Lecture: 28 August 1915

I would like to continue the words of Professor Hardy and, as I hope, the seeds will continue which I sowed in his school. Many pedagogues, for many years up to the present, have talked about liberty in education. The liberty consisted in this, that one should instruct the child and, at the same time, leave him as free as possible in his action. This idea of freedom was not scientific and (not) clear. It was based rather upon a precise idea, a way of conceiving of the word 'liberty'. Instead, we must make a single idea based upon the reality of liberty. Perhaps, the biological scientist suggests those principles.

Liberty means the liberty to live. If we observe all the things about us, we could say that they all had liberty to live, but in a separate form of liberty. If we should be arrested, for instance, or should stop at the flight of the bird and form an idea of liberty from this alone, we would weep on seeing a plant, because we would say, 'Oh, what an unfortunate slave this is that has to keep its roots fastened in the ground'. (Then,) carried away by the liberty of the bird, we might be tempted to root up the plant and pull its roots out of the earth and leave it. In this way, we would have killed and not given liberty. The bird is free in flight and the plant is free when its roots are fastened in the ground. Every being, or every thing is free when it is able to complete or fulfill the laws of its life.

The positive science which has been born in recent days and which has given the direction to our modern thoughts has

CALIFORNIA LECTURES

penetrated into the school and also into the family life of the child. It has sought to improve the conditions of the child's life. Positive science has done a great deal towards giving back the physical life of the child into the natural laws of life. This has been the first step in the liberation of the child. He has been liberated to be healthy in body and to become beautiful. He has been liberated from the dangers of disease and, in great part, has been liberated from the danger of death. However, this liberty which has been given to the child has not consisted in allowing him to do what he wishes, but the liberty has been given by allowing him to interpret exactly the laws of his life.

In giving, for instance, freedom in nourishment, it has not let the child eat anything he desired. If, for instance, the child wanted to put coal or dust, and such things into his mouth, he was not allowed to choose freely. The liberation, as regards the nourishment of the child, has consisted in finding the exact food adapted to his needs, finding the time which he needed to assimilate this food and respecting absolutely the laws of his nature in regard to this. In this way, I repeat, we have liberated the child from denutrition [*sic*], from disease and death. When we see this modern child healthier and more beautiful than the child of old, if we should see him at the table, we (should) simply see a child with rational food before him. When we hear that the child is physically free as regards nourishment, we must not imagine that the child who is playing with the things on the table, who is running about or sitting down, is in that respect the same. Now, along the same lines, we should think of the completion of the liberation of the child, because when we think of freeing the child or giving him liberty, we must realize that, above all, he is approaching the birth of the intelligent creature. So it is impossible that the question of education should not enter into the liberty of the child.

Education must enter into the liberation of the child. Now, he who works for liberty is working in research for the Lord because all of life is based upon eternal laws which form the essence of life itself. If we think of liberation with preconceived ideas such that laws do not exist, we have a strange idea of liberty formed by ourselves. (This strange idea) leads to chaos

OAKLAND

and death (and) is a similar idea to rooting up the plant to give it the liberty and the birth we think it needs. Knowing that life is sustained by laws, we should try to give to the human being the environment which is adapted to and necessary for his life. We should retire and observe the life develop. If we have an environment really adapted or suited to the life, we will have this proof of the fact that the being will move along quickly, following the laws of his life.

When a method of education is based upon the idea of liberty, this method should give the freedom to leave the environment in which the life can develop freely and then to observe (how that life responds). That which the free child gives us is exactly the revelation of the laws of his life. So, we found that our children did not prefer the disordered actions which were considered the free acts of liberty, but showed a passionate preference for the acts which showed an intelligent purpose. When we gave these objects, which are in the system of education, to the child, we found that the child tended to fix his attention and his exercises passionately and intensely upon the object. It was the revelation of the child which permitted the teacher's work to be put on one side in our method because it was in working alone, thus rendering concentration possible, that the child developed. So, in giving this liberty to the child, we have liberated the child from the person who bound him with her will and personality. (The teacher in the old method bound the child in education similar to the way) we bound him with swaddling clothes. This has revealed to us the profound thought of the liberty of *thought* [sic]. Free thought is possible and developed when the child is free to be developed without another person trying to mold his mind according to their image.

This liberty of thought which has been proclaimed as a social acquisition can be proclaimed socially if it has not first been acquired as an education. But, upon this basis, the problem was easy to solve, up to a certain point, because one saw in this environment all those things which make it possible for a child to act spontaneously. Then we find how the child proceeded to learn all the things and how to do them. Evidently the child does not go in search of culture or learning, or, at least, he goes in search of culture or learning only as a means upon which he can place his feet. It is upon the footing of culture or learning

CALIFORNIA LECTURES

that the great spontaneous development begins which can be called freedom of the mind. In fact, the child will take two seconds to learn a thing, but if that something responds to the needs of his intelligence or his potentiality at that moment, then he stops and fixes his mind upon this thing and repeats the exercises for a long time in succession. For an hour, for instance, or an hour and a half in succession and successively he returns to the same task continuing and completing his inner work. It is in this way that his intelligence develops. This is the natural law of the development of the intelligence.

When the child can freely follow the laws of his life, he is full of joy or of expansion. This shows that he is satisfied and that he has satisfied a need. (This) is something quite different from when the child learns something from the outside. One can see that when the teacher from the outside wishes to instruct the child, she is tearing the soul of the child away from the law of his natural development. So we have a line drawn upon the relation between our development and inner growth and learning. Culture and learning can be a means which may have as an end the development of the intellect. If we leave the intellect free, it is as though we left a large space free for the feet of the child and the child (is) free to run. But what is necessary is that this child shall be free to run upon that space. If we do not give successive grades of learning or culture upon which the mind can fix itself upon great things and exercise itself strengthening the development; if, instead, we take this earth and simply place it upon the shoulders of the child, putting it there as a heavy weight, the child becomes burdened or overstrained. So, if we overburden the child with culture, we overwork or tire him and have what we call 'overwork' in the school.

There is, (however,) a way of changing culture and learning into a form of gymnasium apparatus upon which the mind of the pupil and child can strengthen and develop. We see that when the child is free in his intelligence, he also transforms in culture. He becomes calm. He also has a strong personality and, at the same time, he is obedient. This may surprise us, at first, but if we reconsider and think again, we must realize that we were repressing the child's culture (and we) were putting our will and our culture in place of his.

OAKLAND

We have always posed as a problem how to obtain obedience in the child, without realizing that the power of obedience was a higher power because it depends upon adapting oneself to others. This can take place only if there is a great richness. How could obedience be attained by means that prevented the development of the child? The obedience which we required from the child was submission. Obedience, as it is generally understood, is also obtained by this method because the child depends and develops his own personality, his own character. (He is), therefore, superior to what he was, a slave. Many think that it is impossible to make a child moral except by educating him as by an external education. We all have a prejudice against liberty. We have the prejudice that if a man were left free, he would become immoral and, yet, we can all know that our morality does not come from without but from within. It is our instinct which makes us feel that we are wrong, or an adventurer who is carried away from the lines which we consider moral.

In reality, our children have shown themselves much quieter and more well behaved than the children in the ordinary schools. So many people have asked me what I do if the child is rebellious or capricious. (They ask) what I do to correct it. I really do have to answer, saying, 'But, really these children are not rebellious or capricious, so I do not know how to answer you'. A mother of a family kept after me for three years so that I would have an excuse or an occasion when I could tell her the solution to this problem. But have we not, perhaps, the example of the child not yet born, or hardly born, or in the first year of his life? What was the characteristic of the child in the golden times in the first year of his life? Does the child continually cry? One sees now that the crying was not the crying of nature, but of suffering. Today, the child's life in the first year proceeds along the lines of his own life. Therefore, he no longer suffers and he no longer cries.

The caprice of the little child is to be compared to the crying of the newborn babe. It is a sign of pain for a life which is suffering. (This crying) is also (an) act of rebellion against the bonds which have been put on his own life. It is the instinct of his own salvation which makes the child capricious. When the spiritual needs are satisfied, this external sign of suffering

CALIFORNIA LECTURES

disappears. It seems to us that the bonds of the children disappear. Also, when the needs of adult men in society are satisfied, (they) become calmer. What a difference there is between a group of men who dine in a restaurant, who are kind and well mannered, who are afraid even to tread upon the toes of one another, and men who are famished, who fight over a piece of bread, who seem to us like brutal or bad men. People look at the well-fed men and say, 'Oh, how good these men are'. In reality, they are men who have been satisfied in some of the needs of their (lives). (But,) we call them more civilized and moral.

Now, there are needs that are just as strong as the physical needs. These are the intellectual needs, which, if satisfied along the lines of nature, make the children good. Not only this, but this state of calm allows that flame of love which exists in men to burn or to light up. We all know that we could not put love into the heart of humans, if it were not there in nature. What is necessary is that (the) flame of love which exists shall be free to expand.

If we meditate upon the way we have treated children in the past, we will probably find upon our conscience so many things which we have done against love, so many flames that we have extinguished in the child, that we must not be surprised by the fact that in putting the human soul in a proper relationship with the laws of its life it manifests itself and grows beautifully. But what must make us wonder some day is the way we allude to ourselves by thinking that we were the creators of what is beautiful in our soul. If we think of the acquisition of liberty which we have made in life, we will realize that each conquest of liberty has permitted life to (contract) more. This is liberty, the liberty which allows every man to destroy others. As the road, or the path of life is hidden, it is difficult to follow. We require what we call a virtue, or, that is to say, patience, as humanity goes little by little, step by step along that difficult road which is the road of life.

Today, we have concentrated on the production of liberty for the child. In this way, we have made every ideal of liberty pleasant. We must remember that the liberty of man is not only physical liberty of thought and that liberty of thought does not mean that thought can go vaguely around in chaos.

OAKLAND

Liberty of thought means to be able to liberate ourselves from the thought of other men in order to follow our own law of life.

Ladies and gentlemen, allow me to thank you for the generosity of feeling with which you have received (me). The representative of the Government, the illustrious representative of all the educators of this country, the illustrious representative of science, and all of you, allow me to thank you deeply. I come from the country which is the oldest in civilization. I come among you who have the youngest and most flourishing civilization of all that exist. In this moment, we feel united, and this union represents a reciprocal help. Let me thank you for the great help which you are giving to this work, personally and also in the name of my old country.

This method was born amongst the most miserable and unfortunate children in my country. After the terrible earthquakes in Sicily, Calabria, and other places, schools of our method have sprung up. I will send word to those little children, to the teachers who are educating them and to all those who are interested in this work in this terrible time of suffering. I will say that a young country, strong and generous, has taken into its arms, almost as though to adopt (them), the children born in our country.

Perhaps you cannot fully understand how much this will mean to those people who at this moment are working heroically! (Certainly,) those who are higher and those who are the most miserable will be consoled by this feeling which you have shown. (Their) hope in the world lies in the renovation of the world by way of education.

* * *

It is interesting to note that the National Education Association in its *Journal of Proceedings and Addresses of the National Education Association* (vol. 53, 1915) published the text of four lectures by Maria Montessori: 'My System of Education', pp. 64-73; 'Education in Relation to the Imagination of the Child', pp. 661-667; 'The Origin of Intellectual Work in School', pp. 717-722; and 'The Mother and the Child', pp. 1121-1130.

These texts were also reprinted as separate pamphlets by the House of Childhood for the National Montessori Promotion Fund in 1915.

like
dogs

Newspaper articles

like
boys

Introduction

San Francisco newspaper coverage of Maria Montessori's participation in the Panama Pacific International Exposition held in San Francisco in 1915

The San Francisco Call and Post newspaper published a series of twenty-four articles submitted by Maria Montessori beginning on 9 August and ending 1 October 1915. This newspaper series was entitled: 'Child Culture and Mental Hygiene'. The paper notified readers of this series by placing a boxed notice on the bottom centre of its 6 August 1915 edition. On 12 August 1915, a complementary editorial appeared on its editorial page entitled 'Dr. Montessori's System of Child Training'.

<i>Number/Date</i>	<i>Page</i>	<i>Topic/Contents</i>
1. 9 August 1915 258	Front page and page 9	Announcement of article appearing on page 9. Description of how/where Montessori started her career in education, first of 'deficient' then of 'normal children'
2. 11 August 1915 263	page 6	Description of Montessori's first school (1898), 'Institute for Mental Defectives' and the introduction of her 'method of teaching grammar to defectives'
12 August 1915 266	Editorial page	'Dr. Montessori's System of Child Training'
3. 13 August 1915 267	page 5	Description of Montessori's method of teaching writing through practical life materials such as button frames

NEWSPAPER ARTICLES

<i>Number/Date</i>	<i>Page</i>	<i>Topic/Contents</i>
4. 16 August 1915 270	page 6	Description of Montessori's method of educating the senses through fixing attention so the child might distinguish between and among things, thereby developing the intelligence
5. 18 August 1915 273	page 5	Description of how Montessori's medical colleagues belittled her for leaving surgery to teach children. She explained how she brought the study of the human soul into science as she describes her method to be different from Rousseau's, Pestalozzi's and Froebel's
6. 20 August 1915 276	page 16	Description of the fundamental principle of Montessori's method, 'the greatest possible individual liberty of the child so as not to hinder the development of spontaneous action' and her criticism of the 'old' method of teaching
7. 23 August 1915 280	page 11	Description of Montessori's method of discipline as productive of the child's liberty - freedom within limits
8. 25 August 1915 283	page 16	Description of Montessori's method of discipline, training to activity and work, rather than to passivity and obedience, as in the 'old' method
9. 27 August 1915 286	page 16	Description of how Montessori's new method of education requires teachers to be keen observers of and servers to the child
10. 30 August 1915 290	page 11	Description of Montessori's method of practical life exercises
11. 1 September 1915 293	page 16	Description of Montessori's didactic materials and their use and the teacher's need to observe
12. 3 September 1915 296	page 6	Description of Montessori's education of the senses
13. 6 September 1915 299	page 16	Description of the 'aim' and demeanour of the 'new' teacher, the aim being 'to lead the child from sensations to ideas whether concrete or abstract, above all to the association of ideas'

INTRODUCTION

<i>Number / Date</i>	<i>Page</i>	<i>Topic / Contents</i>
14. 8 September 1915 302	page 5	Description of Montessori's method of developing the child's powers of observation after having used the sensory materials to develop the child's senses
15. 10 September 1915 305	page 8	Description of Montessori's presentation of reading and writing materials after educating the child's senses, specifically the sandpaper and block letters
16. 13 September 1915 308	page 5	Description of Montessori's method to develop the child's writing by using a stick to trace letters and by presenting combinations of letters
17. 15 September 1915 311	page 6	Description of Montessori's teaching of reading, how writing and reading are related and what reading is
18. 17 September 1915 314	page 6	Description/continuation of how to teach reading as a mental, logical process
19. 20 September 1915 318	page 16	Description of how to teach arithmetic and of the materials, red and blue rods, and so forth
20. 22 September 1915 321	page 22	Description/continuation of using the mathematical materials to teach numbers, including the problem of zero ('0')
21. 24 September 1915 324	page 9	Summation of Montessori's teaching materials and a description of the teacher as 'guardian' for the child
22. 27 September 1915 327	page 18	Description of how Montessori's method resulted in developing the children's concentration and self-discipline as well as awakening their social sense
23. 29 September 1915 330	page 16	Description of the <i>Casa dei Bambini</i> with the Pan-Pacific International Exposition (hereafter PPIE) 'demonstration class', how the children act from interior discipline
24. 1 October 1915 333	page 15	Description of the 'significance and aims' of Montessori's method; her 'new' type of teacher <i>vis-à-vis</i> the 'old scholastic system'

NEWSPAPER ARTICLES

Number / Date	Page	Topic / Contents
— 16 August 1915 336	Front page and page 2	Announcement of Montessori's talk on 'My System of Education' at the National Education Association conference and an extensive excerpt from her talk

Three other newspapers included articles concerning Montessori's involvement within PPIE: the *Bulletin*, the *Examiner* and the *Chronicle*, but none of these did any more than publish an article notifying readers of Montessori's participation.

The *Chronicle* published a front-page article on 5 August, 1915, entitled 'Education by Suggestion will be Aim of Montessori Class at Fair'. This article included a picture of Maria Montessori with a child, Master Joseph David Marks, placing a cylinder into the cylinder block. The article commented briefly on the development of the individuality of the child through the Montessori method in the 'House of Children' demonstration class held within the Palace of Education 'during the next four months ... from 9 to 12 in the morning'. Included were names of some of the children, including Margaret Pershing, daughter of General John J. Pershing, United States Army. The article also noticed the beginning of 'her series of lectures for the international training course for teachers ... tonight at 8 o'clock in the Massachusetts Building ... reception ... following the lecture'.

The *Chronicle* lists the following twenty-one children as participants in Montessori's 'Demonstration School' held at the Palace of the State of Massachusetts on the Exposition grounds; the other nine children were in the list published by the San Francisco *L'Italia*, 6 August 1915 - number 218 - and are those marked with an asterisk (*):

Wm. Mitchell Baxter	1713 Green St.	San Francisco
Alice Bernee*		
Bruce Worster Brown*		
Robert Summers		
Brookings*		
Chester Buchanan	2717 Berkeley St.	Berkeley

INTRODUCTION

Percy Cotton	946 Noe St.	San Francisco
Marinda Cummings	556 Sixteenth Ave.	San Francisco
John S. Drum, Jr.	2114 Broadway	San Francisco
Alice Ellinwood	2523 Filbert St.	San Francisco
John Corbett Gill	2555 Larkin St.	San Francisco
Jean Baird Hartzell	3021 Fulton St.	Berkeley
Mortimer Kuhn*		
Maryaretha		
McCracker*		
Arthur McEwen*		
Elizabeth McWood*		
Cathleen Machemore	2843 Green St.	San Francisco
Joseph Marks	3326 Washington St.	San Francisco
Matthew Marsh	1501 Leavenworth St.	San Francisco
Emil Morris, Jr.	2872 Clay St.	San Francisco
Catherine Musante	Jackson St.	San Francisco
Marcella Oberti	1511 Mason St.	San Francisco
Mercedes Quinonez	Stanford Ct. Apts.	San Francisco
Helen Storer*		
Franklin Thomas	6117 Racine St.	Oakland
Welbourne Thomas	617 Racine St.	Oakland
Margaret Pershing	Post of Persidio# 20	San Francisco
Claudine Cotton	2098 Vallejo St.	San Francisco
Warren		
Charles Albert		
Warren*		
Ralph Waldo	430 Point Lobos Ave.	San Francisco
Wellerstein		
Robert T. Whitcomb	Massachusetts Bldg.	San Francisco

* * *

The San Francisco *L'Italia* provided significant coverage, including notice of the lectures, name-contents of some of the lectures, as well as a complete list of the thirty children who were chosen from a field of 2,500 applicants to participate in the demonstration class room. Furthermore, *L'Italia* included a series of nine lectures submitted by Maria Montessori written in Italian and served notice of a series of lectures she would give at the Italian Cultural Center, Civic Center, 218 Post Street, beginning on 8 September 1915.

NEWSPAPER ARTICLES

The San Francisco *Examiner* provided sparse coverage of Montessori's Exposition visit. A front-page notice, dated 6 August 1915, notified the public of her lecture series at PPIE. The article is titled: 'First Lecture given by Dr. Montessori'; a sub-title states: 'Noted Educator begins Demonstrations of her System'. The article says that 'Dr. Maria Montessori delivered the first of her International Training Course lectures last night before more than 300 educational students and guests in the assembly hall of the Massachusetts pavilion at the Exposition'.

The San Francisco *Bulletin* included a small article in its 5 August 1915 edition, on the front page of Part Two entitled 'Montessori Classes [sic] are to be Formed'. The article observes that 'more than a score' of educators 'make up the initial class'.

The *Los Angeles Times* verifies that Maria Montessori was in L.A. on 7 May 1915, attending a reception where she was guest of honour, together with a Fr. Tonelli who acts as her interpreter. The notice on the bottom of Part II, page 6, 27 May 1915 is that Maria Montessori is to give a series of ten (10) lectures, commencing the 27 May, following thereafter each Tuesday and Thursday. That would place them on: 1, 3, 8, 10, 15, 17, 22, 24, and 29 of June. However, I have only five (5) available: 7, 14, 27 May and 9 and 10 June. None of the subsequent *L.A. Times* for those dates or the day before provides any further notice of Montessori lectures.

The San Diego *Sun* confirmed that Maria Montessori lectured at the San Diego Exposition on 13 July 1915. Other San Diego *Sun* newspapers were missing for the other date and no other reference was found to Maria Montessori in those which were available.

The Exposition issued an 'Official Program Published Daily', the price being 10 cents. The San Francisco Public Library 'History of San Francisco' Special Section contained many of these 'Daily' schedules but none listed the lectures of Montessori on several of the dates she lectured. A pamphlet entitled 'Special Days and Events, San Francisco, California, February 20 to December 4, 1915, issued July 1, 1915' made only one reference to Montessori. Saturday August 21, 1915 has, among other things: 'Mme. Montessori Day'.

INTRODUCTION

The San Francisco Public Library 'History of San Francisco' Special Section includes a five-volume book entitled *The Story of the Exposition*, by Frank Morton Todd, dated 1921 (606Sa521st). Volume IV, Chapter X is entitled 'Some New Styles of School' and devotes pages 65-68 of its 65-71-page chapter to Maria Montessori. Todd describes the students' activities during the Demonstration Class, 'from 9 o'clock to 12 ... (for) 36 days ... (when) many of the children were writing and composing words' (p. 67). Todd also notes that 'A training-school of two large classes in the Montessori system was conducted by the Dottoressa, through an interpreter, in the Nevada Building after August 1, lasting until December' (p. 68).

* * *

Twenty-four articles from the San Francisco *Call and Post* and nine from *L'Italia* are reproduced on the following pages.

Note: As in the Lectures section, there are a few minor discrepancies of dating. It has not so far been possible to resolve these problems.

Articles from the *San Francisco Call and Post*

Article 1: 9 August 1915

This article is announced by the *Call and Post* on page 1:

Here's First *Call* Article Written by Dr. Montessori

Dr. Maria Montessori, world's foremost educator of children, who begins today a series of articles written exclusively for the *Call and Post*.

It begins on page 9:

Writer tells how she first became interested in the work of developing children

Dr. Maria Montessori's series of articles explaining her famous educational system for children begins today.

Here is the first installment, in which Dr. Montessori tells how she became interested in the work of developing child mentality which finally resulted in her development of the system which she is demonstrating at the Exposition.

Succeeding installments of this remarkable account will explain the methods by which Dr. Montessori puts her system into practice.

Each article has been translated from Italian by Ettore Patrizi, editor of L'Italia. The personal account of this famous

CALL AND POST

woman's achievements is one of the most interesting newspaper features ever offered to the San Francisco public.

It affords me extreme pleasure to write these short articles in the *Call-Post*, for through this medium I can speak to the greatest number of women. In them I find the best co-operators in my mission. They will quickly grasp the significance of the fact that I was the first woman physician graduated from the famous University of Rome and then admitted to the leading hospitals of that city. This was in 1890. It was in those hospitals that I was first confronted with the child question. There were children of the poor by the hundreds in the hospital wards, and my heart and soul were deeply impressed by the condition of those innocent victims; and in them, in their poor little suffering bodies, I saw gathered together all the most vital social questions which appeared to me magnified as though seen through a powerful lens. But of all those small creatures, born to perpetuate humanity, those who mostly impressed my mind and moved my heart were the feeble-minded, the idiots, the epileptics and deficient in general in the great asylum of Rome.

Taught students

At the time I was honored with a position which no other woman ever had in Italy – I was assistant in the Clinic of Psychiatry and helped the professor to teach students in the examination of the insane. I was also editress of the special bulletin issued by the faculty on nervous diseases and gave special attention to all modern studies regarding the abnormal child. In those days the acme in the progress for the cure of the deficient was the use of thyroid, for it was supposed that the cause of deficiency was a kind of rupture in the thyroid gland which did not act properly, and it was thought that a thyroid preparation would have wonderful results in improving the intellect.

Although very much interested in this treatment which would improve intelligence, yet, unlike all the other doctors of the asylum, I was attracted by that colony of deficient children, not from a psychological standpoint, but morally. It was not the

NEWSPAPER ARTICLES

cure with the thyroid, but other considerations which attracted and induced me to live with them.

Intellectual help

One day, while I was in the asylum, in the children's ward, a newspaper dropped from my hands and, to my astonishment, I saw the little weaklings rushing to pick it up and tear it, each of them getting a piece. In doing so, it seems as though the little ones were overtaken by a great joy for such a conquest. Then a simple and yet deep thought came to my mind: 'How little is needed to interest these poor unfortunates! They, more than the others, are in need of education and of intellectual help.' This idea got a hold on my mind and remembering that half a century before, a French scientist, Edouard Leguier, had written a book on the education of the feeble-minded, I immediately went to the library of the asylum and devoured the contents of this book. After I had read the book, another idea came to me: 'There was a possibility of educating the deficient! Why then was not this done?' And I found the answer: 'Because neurotic and deficient children go into the domain of physicians, and physicians are out of the field of education.'

Education necessary

I then grasped the idea that to fortify intelligence without education was a vain task, and this is why the deficient question in medicine was the most neglected of all. Between physicians and teachers, at that time, there was an absolute separation; they never met in their social and scientific work. Consequently, I determined to get the problem of the deficient out of the field of medicine, bringing it into the educational field. To that end, I availed myself of the opportunity of a pedagogic congress held in Turin in 1898 and before the two thousand teachers there gathered, I presented the question of the deficient children which includes the idiots, the imbeciles, the feeble-minded, the abnormal and the anti-social, from whom come the most wretched men of the world.

CALL AND POST

My appeal found an enthusiastic response among the teachers of Italy, who suddenly became the protectors and tutors of all deficient. It was like a spark developing into a big fire, so great was the interest shown throughout Italy by the question I had raised. I thus succeeded in my first aim: that of bringing the deficient children question out of the realm of medicine, to the pedagogic field, where it succeeded wonderfully, showing that this was the natural and true element for its solution.

Abnormal child

Before I proceed, I must inform the reader that I speak first of the abnormal child because it was through my study on it that I came to the splendid results of my experiences and method for the normal child.

It was a day of triumph for me when I finally succeeded in getting out of the asylum that colony of deficient children and brought them to a special institute established by me with the generous co-operation of the most enlightened ladies of the Roman aristocracy. Even the simple ceremony of the exit of those children from the asylum turned to be a great event in the Eternal City. The streets were crowded with all classes of people rejoicing in seeing the unfortunate little ones leaving a place of gloom, a cold scientific ambient, to a joyous atmosphere of life and pleasure. The leading hotel men of Rome had offered their buses to convey the children to their new home into which they made a triumphal entry.

Special class added

In my institute was soon added a special class of outside children, coming from the regular primary schools, where they had been judged refractory to education for insufficient mental qualities. I gave to my institute my most earnest attention and care, and while directing it, I gave lectures to the teachers of the primary classes and I, myself, taught the children from 8 a.m. to 7 p.m., entirely forgetting my medical career to devote myself

NEWSPAPER ARTICLES

completely to the new cause in which I foresaw the beginning of the solution of the great child question. I lay stress on the fact that I forsook my medical career because I had been very successful in it and a future of moral and financial satisfaction was ahead of me; so fortunate had been my career in the clinic of the University of Rome that although I was the only woman doctor graduated, yet among all the graduates, the faculty selected me as its representative to the International Medical Congress held in Berlin at that time. But no financial compensation whatever and no other moral satisfaction could give me a more sublime delight than my entire devotion to a cause from which depends the future of humanity.

like
toys

CALL AND POST

Article 2: 11 August 1915

Child Outcasts Educated

Montessori Plan Wins

Her Grammar is not Book

The following article is the second in the great series on 'Child Culture and Mental Hygiene', written especially for the Call-Post by Mme. Maria Montessori, the world's foremost educator. The organization and small beginnings of Mme. Montessori's Institute for Mental Defectives, and incidentally the organization and the beginnings of the Montessori system, are described briefly but graphically for Call-Post readers. The articles are translated from Mme Montessori's manuscript by Chevalier Ettore Patrizi, editor of L'Italia.

In the Institute for Mental Defectives, which I established in 1898, I commenced with 109 children. Sixty of these, I selected from the insane asylum, including idiots, imbeciles, epileptics and paralytics. The remaining fifty were children rejected from the public schools as sub-normal and ungovernable. These children, so rejected, according to the laws then in effect in Italy, were left entirely to their own resources. They were literally outcasts. Children also who had to repeat the work of one grade for three consecutive years and those who were generally refractory, were dismissed from school and were not allowed admission into any other public school of the kingdom.

Thus, these children who were potentially the most dangerous element in the community, were left to develop their worst inherent tendencies, and were denied the helpful influence of education.

Face dark future

The children, for the most part, belonged to the poorest class. Persecuted and neglected even by their parents, they left school

NEWSPAPER ARTICLES

and home with the stigma of moral and mental incapacity, and prepared for a future life of worthlessness and crime.

One day I came across a group of five or six of these little outcasts. They made their homes on the embankment of the Tiber, and had become the tools and confederates of older children in petty criminality. When they were discovered in any theft or other misdemeanor the leaders would disappear, leaving the smaller children to receive all the reproach and punishment.

This was now their only 'school'.

In my institute, then, there was thus gathered together several different classes of defective children, providing a splendid opportunity for the experiment of my method of training.

Kiddies made welcome

When these children from the streets and from the asylum entered my school they were greeted with hearty manifestations of welcome and with genuine cordiality. For the first time they were made to feel that they were wanted and desired. There was not the slightest suggestion of suppression or of strict vigilance. As soon as they came to the institute they selected from among the various occupations whatever they liked best.

My first aim was to fill the school with interesting and attractive features. Little novel occupations were everywhere available. I was like a Turk in a bazaar. Upon the arrival of a customer for whom he has anxiously awaited, he showers him with compliments and with courtesy, sings the praises of his wares, and abides the opportune moment when the customer shall become interested in some particular article.

Watch children play

I, very much in the same way, encouraged the children to go about the institute freely, and to investigate everything. My moment was when the child's attention was definitely attracted

CALL AND POST

I became obviously enthusiastic about whatever a child had selected for occupation or amusement. Thus, by being allowed initiative, the children worked with eagerness and gradually developed the best attitude towards work.

One of my most original schemes was employed to teach them grammar. It proved to be one of the most pleasurable and exhilarating of exercises to the children. Being too long to explain in detail, I shall give but an outline of my method of teaching grammar to defectives.

In explaining the significance of a noun, I associated the name of a thing with the idea of calling that thing. I conveyed to them the idea that only by the use of a noun or 'name' could one succeed in getting that thing or calling that person. For instance, I would stand in the center of a group of these children and with dramatic emphasis and in a loud expressive voice I would cry, 'Come to me —', 'Come, sweet —', 'Come, beautiful —', 'Come, good —'.

Draw their interest

The children turned toward me and looked perplexed. Having mentioned no name, who should come? The little ones would ask, 'To whom do you speak? To whom do you call?'

Another time, I would say to them, 'Bring me red —'. Immediately one of the children gave me a red pencil, which he held in his hand. 'No, dear, I did not ask for a pencil.' Another child brought me a red piece of paper. 'No, my child, I did not ask for paper.' Again, another child brought me a red cloth. 'But, no dear, I did not ask for cloth.' Suddenly, a child ran triumphantly with a rose to me. But again I made the reply, 'I am very sorry little one, but it is not a rose that I want.'

'Then, what DO you want?' they would ask in chorus, laughingly but somewhat shamefacedly, because they had not grasped my meaning.

'What do I want? If I don't say the noun, or "name", how can YOU tell what I want? What I want is my red apron.'

The word 'apron' was as refreshing to their minds as an April shower on parched grass. Immediately, they all rushed to bring me the apron.

NEWSPAPER ARTICLES

The names that the children became acquainted with in this way were written on cards and dropped into a box, which was labelled 'nouns'.

This box was the beginning of the new grammar – no longer a book!

* * *

On the following day – 12 August 1915 – the Editorial page included the announcement:

Dr. Montessori's System of Child Training

Dr. Maria Montessori is now writing for the *Call and Post* a series of articles on her especial system of educating very young children. This newspaper feels itself particularly fortunate in securing the services of this brilliant woman, whose contribution to pedagogy has been the most important educational gift of this generation. While the first article, published on Monday, dealt with Dr. Montessori's first experiences with deficient children, she quickly discovered that the methods of awakening their dormant intelligences were equally successful in speedily developing the capabilities of normal boys and girls. At the Montessori school now conducted at the Exposition the pupils are all children of bright minds.

We congratulate the readers of the *Call and Post*, mothers and fathers, on this opportunity to familiarize themselves with the principles of the Montessori system.

CALL AND POST

Article 3: 13 August 1915

Learn How to Speak by Writing

Montessori Method

Defectives' Education is Aided

The following article is the third of the series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post by Mme. Maria Montessori, Italy's great educator. Among other interesting features of her method, which is fast revolutionizing child training throughout the civilized world, Mme. Montessori tells how she first conceived the idea for her system of teaching writing. The writing lesson is one of the most distinctive in the Montessori method.

Mme. Montessori's articles are translated for the Call and Post by Ettore Patrizi, editor of L'Italia.

Among the children in my Institute for Mental Defectives there was one, a child of six years, who though born with hearing, was of such tardy mental development that he was unable to convey a thought either by language or by signs. After I had failed in all attempts to draw his attention to the sounds of words, which I pronounced very distinctly, or to associate in his mind the more common objects with their simple names, I decided upon a daring step. I would try to teach him how to write!

I prepared three sets of alphabets. One, of large wooden letters painted a bright color; the second, with letters of corresponding size and color, but written on a large chart; and the third set, stenciled in wood. I guided the hand of the little feeble-minded child around the outline of each letter, pronouncing the respective sounds of the letters as I did so.

Knows letters by touch

To my surprise, I soon learned that the child could not recognize a letter at sight, but could easily do so by touch. For the

NEWSPAPER ARTICLES

time being, I thought it wise to give up the idea of teaching this child the spoken language, and I directed all my efforts towards developing in him the power to distinguish letters by feeling them.

Thus I succeeded in teaching him to recognize and eventually to write words.

The handwriting of this child was among the most perfect of all the children in the Institute. Through this exercise he also learned to speak so well that he even recited little poems.

It is easier then to learn how to write than to learn how to speak. In fact, the movements of the hand which actually mark the word are more pronounced and comparatively simple than the rather delicate but complex movements of the tongue, lips and vocal chords necessary to enunciate.

When a child has any difficulty in learning the spoken language, it is advisable to teach it how to write. For, in writing a word, the child is given a longer time in which to become acquainted with the construction, and by being thus familiar with the details is better prepared to pronounce the letters and eventually the whole word.

This is a most important point in my method, since it has always been the general belief that writing was more difficult than the articulation of words, and the combination of them in reading.

This discovery was the foundation of my method of teaching writing, which consists in guiding the movements of the child's hand around the outline of letters materialized in large, vivid objects.

Today this method, modified and improved, forms the basis of my method of teaching writing to normal children of 4½ years of age. And, even with normal children, it has proven most effective in perfecting pronunciation.

Teaching sewing

Another experiment, which is quite simple, but which has met with decided success, is one that I tried on a deficient girl, 10 years old. I had tried in vain repeatedly to teach this girl the most simple stitch known, that of drawing the needle down

CALL AND POST

through the cloth and upward again. Losing all hope of teaching her to sew in the ordinary fashion, I prepared a good-sized stick, sharpened at the end, and a wide piece of cloth, so coarsely woven that the threads were quite far apart. With the aid of this little scheme, drawing the stick up and down through the large holes in the weave, I succeeded in teaching this girl to sew rapidly.

Learn to dress

Soon after I prepared several frames in which were stretched reproductions on a larger scale of those sections of garments held together by means of lacing, buttons and hooks. The children took genuine pleasure in these 'button frames' and found the little task of fastening and unfastening the material intensely interesting. By the constant repetition of this and like exercises they gradually learned to dress themselves properly.

It was then, with the direct action of the hands, by the tactile sense, that the eye and the ear could be assisted. A new door was flung open to me, through which I could convey knowledge even to defective children.

NEWSPAPER ARTICLES

Article 4: 16 August 1915

Children's 'Lies' only False View

Montessori's Reform

How She Corrects Bad Traits

Madame Maria Montessori, better known perhaps in Italy and throughout the rest of Europe as Dottorressa Montessori, besides being pre-eminent in child training, is one of the world's greatest authorities on the care and treatment of mental deficient - particularly the three divisions of the feeble-minded - the idiot, the imbecile and the moron. In the following article, the fourth of her series, written exclusively for the Call and Post and translated by Ettore Patrizi, editor of L'Italia, Dottorressa Montessori explains the reason for much so called petty juvenile 'criminality'. She insists upon 'education' of the senses as the most effective 'cure'.

Everyone, thinks Mme. Montessori, is subject to some degree of mental confusion. The education of the senses, or the 'hygiene' of the intelligence is applicable, then, to both normal and abnormal, just as the hygiene of the body is necessary for the sick and healthy alike.

Throughout my entire experience, I found the education of the individual senses most advantageous. By 'education', I mean the calling of the child's attention to some small object which would make but a single appeal to each sense, for instance, color, dimension, form, sound, degree of smoothness or roughness, etc. This practice simplifies the observation to a great degree, providing an easier way for the analysis of an object, concretely, rather than abstractly.

It is argued that the fundamental quality of intelligence is that of being able to distinguish one thing from another. To distinguish! Here is the word that characterizes intelligence, just as 'playing' is the word which characterizes a pianist, and 'speaking' the orator.

To distinguish! Not to confound! Mental confusion is just the opposite of clear intelligence. So, what we may call the education

CALL AND POST

of the senses is whatever helps one to distinguish with more exactness. Education of the senses is, then, in other words, the fundamental exercise of intelligence. And, as mental confusion is the trouble with abnormal children, the education of the senses is the only way of redeeming them.

Differences not clear

Deficient children do not perceive differences clearly. For instance, they often confound a triangle with a circle, green with yellow, etc. The popular old saying, 'He can't tell black from white', applied to normal persons, when absent minded or preoccupied, is literally true of deficient children.

Consider what becomes of a mind which builds its ideas upon mistaken perceptions. It is evident that conclusions formed of the outside world by such a mind are necessarily different from those of the normal mind.

In fact, many children who seem to be bold liars are really sincere, and are merely rendering things in the way that they see them.

Subject to illusions

All children during the formative period are subject to mental confusion and illusions, which in the case of normal children are automatically corrected as they grow older – though never entirely. With deficient children such is not the case. False perceptions, to a greater or lesser degree, and even fallacious reasoning may exist in these weak, abnormal minds. How often the so-called juvenile criminal (and the adult criminal) is the result of false reasoning, just as the liar is often the result of false perceptions.

There was a good illustration of this in my institute in a little child who was considered criminal by his parents. At home, he constantly stole money, maliciously killed pigeons, and cruelly persecuted his little sister, on one occasion tying her up with ropes.

NEWSPAPER ARTICLES

Story of stubborn case

This child was the son of peasants, living in a vegetable garden near Rome. From infancy he had a remarkable muscular development and was extremely robust. He was so rough, and his movements were so recklessly active that he continually broke or damaged the household furnishings.

His mother having vainly attempted to correct him by punishment, finally resorted to persuasion and tried to instill into his mind, by reasoning, the necessity of 'being still'. This idea of 'being still' became an obsession with him, and he tried to enforce this necessity not only upon himself, but upon others. The pigeons, he thought were too restless, so he tried in every way to keep them 'still'. To strangle them seemed the surest way, hence his 'malicious' killing of them.

His little sister also moved too much, in running noisily about the house. He wanted her to 'be still', and to this end he tied her up with ropes, hand and foot.

Reason for criminality

One day he heard that money should be given only to useful people. This idea also made a deep impression upon his mind. He afterward stole all the money that he could find in the house, and would run with it to the streetcar conductors, because to him these carmen, who carried the poor, tired people to all points of Rome, seemed eminently useful.

By tracing the false reasoning of this child, it is plain that his criminality was due to a fault of the intelligence. How to correct such a criminal? Evidently by trying to correct, or, better still, to 'cure' his intelligence by putting it in contact with the real, by rebuilding it on true perceptions.

A long work, as all education necessarily is!

And in how many normal children do we find similar errors!

How many of them are incapable of seeing the truth? The 'hygiene' and 'cure' of the intelligence is applicable to all degrees of mental development, just as the hygiene and cure of the body is necessary for the sick and healthy alike.

CALL AND POST

Article 5: 18 August 1915

Mme. Montessori tells of Struggle

I Redeem Man of Future

She Pleads for Soul in Science

In the following article of the splendid series written exclusively for the Call and Post, Mme. Montessori tells of her discouragements in first applying to normal children her now universally appreciated method of training. The real secret of her success where others have failed is due, according to Mme. Montessori, to the practical application of her theories and to the personal supervision of the training of teachers in her school at Rome. The series is being translated from Mme. Montessori's manuscript by Ettore Patrizi, editor of L'Italia.

It is difficult to picture the effects of something as yet untried and unknown, and happy the person who can foresee the realization of his ideas, even though he be confronted with the world's unreasoning opposition. The story of my studies and labors in introducing my method of child training confirms this assertion.

I studied medicine with signal success, and was graduated with high honors, to the delight and gratification of all who knew me.

When I turned my attention to the feeble-minded, and went to France and to England to study the methods used in those countries with this unfortunate class, and applied these methods to the deficient in the asylums of Rome upon my return, again I was publicly admired and encouraged in every way.

Work brings criticism

But when in my care and treatment of the feeble-minded I deviated from the course followed by the other doctors, even though I sacrificed, as I did, every personal pleasure, living side by side with these defectives and devoting my entire time and energy to this new work, I was criticized rather than appreciated.

Even my colleagues who had previously shown esteem of my work in the profession now assured me that I was losing

NEWSPAPER ARTICLES

dignity in undertaking my new mission. When they found that I actually went down among these children and taught them personally to read and write their indignation knew no bounds. In their eyes, I had descended from the high rank of a surgeon to the level of a kindergarten teacher.

The soul in science

Strange contrasts! While my colleagues thought that I was belittling myself I was comparing the importance of their work with mine.

Their efforts, concentrated on microbes, sank into insignificance when measured alongside my new mission – attempting to redeem the minds of the men of the future generation.

Gradually I became convinced that what these physicians despised as a study was exactly what had not yet entered the field of science – the human soul.

It is true that educators before me had tried to bring this soul element into the field of science.

Rousseau, the great French philosopher, was the first to conceive the idea, but his studies remained theoretical and were never brought into practical application.

Predecessors fail

Pestalozzi, also, the renowned Swiss-Italian teacher, introduced splendid principles into this new field of education and established a real method, which he himself put into practice. But, in application, he was far from the realization of the promise of his theories.

In its final working out, his process proved too mechanical and too pedantic. It did not succeed in freeing the child from scholastic slavery, and less yet from the annoyance of the old scholastic methods.

Froebel, himself, whom all of us admire, did not bring the problem to a practical solution, notwithstanding the many good features of his system of training, principally because it became too systematized and full of parrot-like ingenuity, compressed and welded into rigid discipline.

CALL AND POST

Her work graded

After making a careful study of the error and success that accompanied the efforts of my predecessors in this educational work, I decided not to rest satisfied with the consigning of my discoveries and ideas to the printed page, but to personally apply my method.

Upon this decision I first established my institute for mental defectives; next my school for normal children and finally my training school for teachers, so that my work could be carried on by competent men and women who had learned under my supervision.

What prompted me to apply my method to normal children? While I was working with the defectives, it gradually dawned upon me that there was no part of this system that could not be applied to normal children just as effectively.

Deficiency is relative

My method of child training appeared more rational to me than the one in vogue at that time.

I asked myself this question: 'Since my method proves so successful with children of inferior mentality, why should it not prove even more successful with normal children?'

It seemed evident to me that with this better material, the method could be widened in scope and generally developed. This divination became my fixed idea, haunting me after I had accomplished my work with the deficient child. There would be no overtaxing of the brain, but with genuine pleasure and interest on the part of the child who learns voluntarily and almost automatically.

With no forcing of the will or intelligence, my method awakens in the child the soul of the dormant man! My voice finds a never-failing response. As much as has been said of my didactic material, which undoubtedly forms the basis of my method, the real secret of its success is exactly this appeal to the dormant man.

NEWSPAPER ARTICLES

Article 6: 20 August 1915

Desk Slavery for Child

says Dr. Montessori

Punishments all Wrong

In the following article, the sixth of the great series written exclusively for the Call and Post by Madame Maria Montessori, the dangers of the conventional forms used in the old scholastic system are explained by the world's foremost educator. Madame Montessori tells Call and Post readers why she has abolished these forms in her method and the reasons why she has substituted the so-called Montessori 'equipment'.

Ettore Patrizi, editor of L'Italia, translates the articles of the series from Madame Montessori's manuscript.

As I stated in my last article, I left the work with defective children to devote my attention to the broader field of training the normal child, and at first, particularly those of kindergarten age.

The fundamental principle of my method is the greatest possible individual liberty to the child, so as not to hinder the development of spontaneous action. This principle has been applied by others, before me, in the field of education, but without any permanent result. This was due to the failure to create conditions, which would make this liberty possible — liberty which would become part of the spiritual growth of the child. The term 'liberty' should not be misunderstood. It does not imply a complete abandonment of the child to its own resources, but a rational care in the creation of an environment where this liberty can be fully exercised. In connection with this principle all forms that enslave both the body and the spirit have been abolished in my method.

Desk, form of slavery

I immediately did away with one of the most striking forms of scholastic slavery, the desk. It is true that in modern times the

CALL AND POST

desk has undergone several improvements, so as to adapt it to the age and to the physical development of the child. So much stress has been placed upon the necessity for 'hygienic' desks that almost every nation has vied in the perfection of a 'national' desk, going so far as to protect their particular pattern against the rest of the world by patent.

I sometimes wonder when I think of the vast progress made along the lines of anthropology and sociology as applied to the child, why this grave error of the conventional desk has not been detected and corrected. The time will soon come when people will hardly believe that such an injurious form of slavery existed in the field of education in the beginning of this wonderful century.

Criticism of teachers

In addition to the desk, which represented the worst feature of the material enslavement of the child, there was a more dangerous element of slavery – the teacher, who followed the system of discipline, of rewards and of punishments.

In order to succeed as a disciplinarian, the teacher resorts to immobility and to force in holding the attention of the child, using the subsidiary means of premium and chastisement to his end. I can not be too emphatic in my condemnation of this means. Rewards and punishments are the 'desks' of the soul – the chains of the spirit. They are even more dangerous than the material desks, since the latter have been devised with some idea of preventing deformation of the body, but the former induce deformation of the soul!

Punishment all wrong

Rewards and punishments are the stimulus to strain, therefore, the worst enemies of the natural development of the child. The jockey gives sugar to his horse before the race, but applies the spurs and the whip when there is lagging. Still, do any of these methods induce the animal to run as swiftly and as superbly as the horse of the plains?

NEWSPAPER ARTICLES

The first feature of the old scholastic system that my method abolished, then, was the desk. I have substituted in its stead, the ordinary, simple table of firm construction. It is light enough to be moved about the room by two or three little children, and at the same time is large enough to accommodate them. In place of the conventional school 'seat', the children use the familiar household chair.

Children become orderly

Another common piece of furniture serving as equipment in the washstand, low enough to be easily reached by a child of three or four years old. This washstand is provided with little side shelves which hold the soap, brushes and towels. There is also a low wardrobe, containing several compartments, each provided with a small door, and each door with a different key.

Around the walls are hung several blackboards, with boxes containing chalk and erasers attached.

The objection might be made that children could easily overthrow the chairs and even the tables, causing noise and disorder. This has not been the experience, since the child soon becomes accustomed to the careful handling of the furniture and should he accidentally overturn anything he knows, intuitively, that it is his own fault, and realizes that he must be more careful in the future. This automatic correction could never occur with the school desk.

No longer destructive

In a short period the children learn how to move freely about the room without disturbing the furniture.

With the old scholastic method, there was a reverse process. The child remained still and silent because of the physical restrictions which prevented his moving with grace, and upon leaving school he would knock over whatever came in his way. In my method the child learns through experience how to handle objects with the least possible commotion, a lesson an

CALL AND POST

valuable in school as it is at home. And though but a child, he soon becomes a person of free but of correct manners.

NEWSPAPER ARTICLES

Article 7: 23 August 1915

Liberty is Best School Discipline,

says Mme. Montessori

Teach Child to Control Himself

The meaning of discipline in the Montessori system of education is explained by Mme. Maria Montessori for Call and Post readers in the following article, the seventh in her splendid series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post.

Mme. Montessori insists upon discipline which is founded upon liberty, as the highest principle of education.

Her articles are translated by Ettore Patrizi, editor of L'Italia.

Discipline and liberty? In my previous articles I have frequently mentioned the fact that individual liberty was the keynote of my method, but the question naturally arises: 'How to obtain discipline in a class of children who are allowed the greatest possible freedom of action?'

I admit that discipline has been construed in my method as something different from the ordinary conception. My discipline is based upon liberty, and as liberty is active, so my discipline is active, not passive. It does not assume that a person is disciplined because he has been compelled to preserve a mummy-like silence and immobility. Such an individual is not disciplined, but rather, his personality has been annihilated. A person is not really disciplined until he has become thorough master of himself - able to exercise self-control through life.

What discipline means

This is what I term 'active discipline'. Not easily understood nor practiced, but undoubtedly containing the highest principles of education.

A special technique is necessary for the teacher who would lead a child over the road of active discipline. The child being

CALL AND POST

taught to move rather than how to remain still, the training is one that fits him not only for the school, but, in the broadest sense, prepares him for the living of life.

The liberty of the child must be limited only by the collective interest – by the interests of society. Furthermore, it must be kept within the proprieties of manners and of actions. The teacher must prevent the child from doing whatever may offend or harm others, or from whatever has the appearance of significance of undignified or rough action.

Patient teachers needed

This point understood, the teacher must then not only allow, but actually encourage, all expressions of a good motive, regardless of the nature or form. It is essential that the teacher is patient rather than pedagogical. Above all, she must have well-developed powers of observation, and must be keen enough to appreciate the various manifestations of the awakening intelligence of the very young child.

No spontaneous expression of this awakening intelligence should be suffocated. It is difficult to estimate the positive harm that may result from this practice to the child personally, and more difficult to estimate the loss in the advancement of the human race. Some of the finest sentiments, the most brilliant ideas, and the stimulus of unique personalities have never been added to the world's meager store, because all impetus for original expression had been stifled through early correction and criticism.

Correct wrong expressions

The teacher using my method must not only refrain from the discouragement of the child's personal expression, but from imposing a prescribed conventional form of conduct, except where the latter is damaging to the child or to others.

In my first school at Rome, I noticed, one morning, a little girl running noisily about the classroom making unusual gestures. The teacher immediately stopped the child with some

NEWSPAPER ARTICLES

word of correction. I had been watching this little girl closely, whose strange movements appeared to me to have some real motive. Upon questioning her I discovered that the teacher by correction had thwarted the little one's worthy idea of teaching the other children how to pray, with the proper church ceremonials – placing herself in the role of a teacher.

Children help themselves

On another occasion I noticed a group of children gathered around a basin of water which contained some floating objects. Apart from the group stood a very small child who manifested considerable curiosity in what the other children were looking at, but who was unable, on account of his size, to force his way to the basin. I had been watching him from a little distance and saw the expression of genuine delight that came into his face as he carried a little chair up to the group and proceeded to stand on it and to look over the heads of the other children. The teacher saw his efforts, and, with the kindest of motives, picked the child up in her arms, saying:

Teacher thwarts child

'Now, little one, you can see everything better than the rest.' His expression of gladness and triumph immediately vanished. Evidently the child did not feel the sense of gratification that would have been his in overcoming the obstacle with his own resources. The vision of the floating object in the basin did not bring joy, nor the strength that accrues with personal achievement for the carrying out of a more important object. In this case the teacher prevented the child from gaining a most vital point in education without having made it any happier. The little one was about to experience all the thrill of victory, and found himself impotent in the teacher's arms, instead. The look of intense eagerness and concentration which had interested me gave way to the expression of the stupid person who knows that another will assume the responsibility – that another will act for him.

CALL AND POST

Article 8: 25 August 1915

Dr. Montessori urges Freedom

Child Needs Reliance

Goodness not Lack of Movement

In the eighth of her splendid series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post, Madame Montessori has logically extended her ideas of discipline, explained in previous articles, to independence.

Independence and self-reliance, rather than passivity or obedience, are the necessary factors of efficiency, character and power, according to this great educator.

The series is translated from Madame Montessori's manuscript by Ettore Patrizi, editor of L'Italia.

The first idea that must be instilled into the minds of children who are to be actively disciplined is the conception of good and bad.

In this connection, the first aim of the teacher must be that of preventing the child from confounding 'good' with immobility and 'bad' with activity, as is the case in the prevailing form of discipline.

The child must be trained to activity and work, not to passivity or obedience.

The setting of the ideal classroom approximates a large hall where all the children may move about usefully, intelligently and voluntarily, without offensive roughness. The children belonging to such a class may be called actively disciplined.

Personal appeal key

In the prevailing form of discipline, the children are disposed of in lines and to each is assigned a particular place under the assumption or pretense that the children will remain perfectly still. This arrangement can be established as the first move

NEWSPAPER ARTICLES

towards collective discipline only after the children have been accustomed to some form of personal discipline.

In making for collective discipline, the personal appeal should be the keynote. The children should be impressed with the idea that by arrangement in lines or in figures around the classroom they present a more harmonious picture, they look particularly well in such a position, etc.

Lesson vs. imposition

Then their fixedness or silence has the result of a lesson, not of an imposition.

If, after having understood this idea clearly, the children do break the desired order, they no longer do so unconsciously, as a result of a natural restlessness, but with deliberate purpose. That is to say, from a state of repose and order they go into voluntary activity.

By degrees, as the movements of the children become more controlled, they are able to move from an established collective arrangement gracefully and with no suggestion of disturbance. They reflect upon their own actions and take a certain pride in propriety.

They teach teacher

The duty of the teacher is now to observe very closely how the children pass from the first disorderly movement to the spontaneous disciplined movements. This should be her book – the only book where she can study how to become a good educator.

Her results will be truly marvelous. The individuality that manifests itself in such a proceeding, whereby the child is conscious and at the same time free, affords unlimited field of deduction. She will observe that the child with this sort of experience performs a sort of selection of its own natural tendencies, which were at first conducted in the unconscious disorder of its conduct.

CALL AND POST

Child wants freedom

Apropos of freedom, one cannot be free without being independent. Therefore all the activities of the child should be guided to the end of independence.

For, from the moment a child is weaned, it has a natural instinct for independence.

And what is a weaned child? One that, freed from the sole dependence for subsistence upon its mother, finds that it may select as the basis for existence any number of forms of nutrition.

This is the first form of independence.

Still, the child cannot yet be said to be truly independent.

He does not know how to walk, to dress, to wash, nor even to ask for what he wants. He is still the slave of those around him. It is not until he reaches the age of three or four years that he is in a position to become free and independent.

Too much serving

A most important point in training the young child, then, is in assisting it to advance on the road of independence. The assistance must be intelligent, however. Rather than actually being aided to walk, to wash, to dress, or to perform the other simple actions of life, the child must be 'helped to self-help'.

We serve the children, slavishly. It is the great fault of our educational system, since it has smothered spontaneous action.

The chief criticism is that we treat children as they treat their dolls, assuming lack of volition or of incipient power.

NEWSPAPER ARTICLES

Article 9: 27 August 1915

Teacher Must Touch Child's Soul,

says Mme. Montessori

Conscious of Right Reward

The underlying philosophy of the Montessori system of child training is further developed in the following article, the ninth of the Call and Post's series. Madame Montessori, in originating her splendid educational system, has unconsciously, perhaps, evolved a philosophy as practical as it is inspiring.

Ettore Patrizi, editor of L'Italia, translates the series for Call and Post readers from Madame Montessori's manuscript.

In one of my previous articles I classified the system of rewards and punishments as one of the worst features of the prevailing educational method. If we succeed in making the children consciously free, actively disciplined and independent, and have succeeded in giving them the real significance of 'good' and 'bad', the system of rewards and punishments becomes automatically useless.

The only reward acceptable to a child trained along these lines, is the consciousness of right doing – the satisfaction that results from self-help and from personal responsibility. In my long experience there have been many episodes which demonstrated the truth of my deductions, of which the following is one of the most striking.

Mistake of teacher

During the first months in the life of my school, when the teachers whom I had trained were not yet thoroughly conversant with the underlying philosophy of my method, I appeared one day quite suddenly in one of the classrooms and was surprised to see one of the best pupils in the school wearing a large honor cross suspended on a showy ribbon about his neck, and another child seated on a stool in the middle of the room.

CALL AND POST

The first child had been rewarded, the second child was evidently in disgrace. The teacher noticed my surprise, but made no move toward changing the situation, and I was permitted to watch the two children very closely for some little time. The child wearing the honor cross was very busy carrying books and small objects from a table in a corner of the room to the opposite side. Once, in passing in front of the child who was under punishment, he dropped the honor cross, and, to my amazement, went about his work, absolutely heedless of the incident.

Reward system fails

The little child sitting on the stool picked it up, and, handling it most carefully, said to his schoolmate: 'Don't you see what you've dropped?' The other child, looking at the cross with indifference, answered, 'What do I care?' 'You don't care?' asked the boy under punishment, with wonder in his voice. 'Then,' he said, 'I shall wear it.' 'Yes, yes: wear it,' answered the first child in a tone that said plainly, 'But don't bother me.'

The little boy under punishment pinned the cross on his breast, looked at it admiringly, and sat back with an air of comfort, nonchalance and perfect complacency. Evidently the emblem of merit could satisfy the little fellow in disgrace, but the child who was so preoccupied with his work, was not even interested.

Lesson in isolation

In regard to the punishments, I had this experience: When a pupil was disturbing the others and paid no attention to successive solicitations, we used to isolate the child in a corner of a classroom, but permitted him to sit at a table and play or work with whatever objects he desired, from where he said he could observe his schoolmates engaged in their occupations. The isolation had a wonderful effect upon the child, because it not only calmed him, but was a strong objective lesson, inasmuch as he began to realize the pleasure of working in the

NEWSPAPER ARTICLES

company of the other children. With this temporary isolation we have obtained splendid results, and have succeeded in disciplining children who were actual rebels. The isolated child was usually the recipient of special attention, as if he were an invalid.

Whenever I entered the classroom I would go first to him and caress him, as I might a baby. Then, turning to the other children, I commented upon their work very seriously and spoke to them as if they were grownups. I do not know the process in the souls of the children so isolated, but invariably the correction was successful. It was not long before they took a real pride in keeping at their little tasks and in preserving a dignified behavior. As a rule, they showed a tender affection to the teacher and myself.

Teacher must be observer

One of the most important recommendations of my method is that the teacher works individually rather than collectively with the children, giving lessons that are short, simple, concise and objective. The fewer words used, the more perfect the lesson. A most important characteristic of the lessons is that they are always objective, so that the personality of the teacher disappears, and what remains is the object to which she desires to call the attention of the child.

But, always, I repeat, the teacher must be a keen observer. For instance, the teacher must notice whether or not the child is interested in a particular object, how he becomes interested, and for how long. She must observe also the child's facial expression, always being guided by the principle of allowing the child free, individual action. If she fails to see that the child wears a strained, dissatisfied look, the teacher will not know that there is any curtailing of natural selection or of spontaneous action. The teacher should not insist upon repeating a distasteful lesson, and once having dropped the subject, she should be careful not to let the child know that he has failed to understand. The knowledge would undoubtedly cause him to make a severe effort toward grasping the lesson, and a confusion of the natural tendencies would result.

CALL AND POST

Must touch the soul

Suppose a teacher wishes to make a child acquainted with two different colors, say, red and green. She tries to center the child's attention on an object. To teach the color, showing the real object, she says: 'This is red.' Then, showing the other object, 'This is green.' In order to verify whether or not the child has learned the lesson, she says, 'give me the red', or 'give me the green'. Should the child err, the teacher must not repeat, nor insist, but with her usual kindness of manner, put away that particular object.

A great number of people are apt to say, 'That is simple - every one knows that.' True enough, but the point is that very few know how to do it. The fact remains that the average teacher of the prevailing method crams and torments the child's mind with a flood of useless words and fallacies. In the color lesson, the average teacher of the prevailing method would address the class collectively, and compel all the children to pay attention to her teaching, although many of them were not disposed nor inclined to that particular lesson.

In other words, the teacher must touch the souls of her pupils, subtly arousing in each individual child the right attitude, until her merest word or look meets with a quick response.

NEWSPAPER ARTICLES

Article 10: 30 August 1915

Instruct Child on Social Life,
says Mme. Montessori
Teach Cleanliness, Propriety

The actual procedure of an elementary Montessori class is given in the tenth article of Call and Post series on 'Child Culture and Mental Hygiene'. Madame Montessori explains the material as well as the philosophical aspect of each step in her wonderful method, and urges the necessity for a more thorough understanding of childhood.

Ettore Patrizi, editor of L'Italia, is making a special translation of Madame Montessori's manuscript for the Call and Post.

The first step that must be taken in teaching my method to a primary class is to call or to attract the attention of each individual pupil, in the form of practical exercises. Sometimes, this call is directed toward the child's curiosity, sometimes toward the inner life, and again to the social sense. If I may say so, without being misunderstood, it is necessary to proceed with an elementary class, as the scientist does in experimental psychology or anthropology – after having prepared the instruments, which in this case correspond to the environment, the 'subject' must be prepared.

The teacher initiates her work by acquainting the child with the various forms of social life, calling attention to the many unheeded essentials of everyday life – cleanliness, order, propriety, conversation, etc. I have succeeded in building up a set of exercises which duplicate the most striking observances of the child's home life.

Children inspected

As soon as the children arrive in school they are given a general inspection. The teacher looks at the child's ears, teeth, hands, face, hair, etc., paying particular attention to such details of appearance as torn or soiled clothing. On succeeding

CALL AND POST

days the teacher shows the child how to properly care for different parts of the body, how to wash the face, hands, to clean the teeth, nails, etc., using the little washstand, basin, towels, soap and washcloth mentioned as part of the classroom equipment. A simple lesson in hygiene and physiology accompanies each exercise for cleanliness.

The teacher must also show the older children how to help the younger ones, without preventing the latter from trying to help themselves.

After the lesson in practical cleanness, the children put on their own aprons and are ready for their little tasks. The first is a visit about the entire classroom. They are taught to inspect the places where dust is most apt to accumulate very thoroughly, and how to use such household objects as brushes, brooms, dust-cloths, etc.

Gracefulness is taught

The children then take whatever places they may select, usually showing preference for the same one every day, and go through an exercise in correct and graceful sitting. The posture lesson also includes standing, walking, passing before a person, saluting, giving and receiving objects, etc. As a part of this exercise, the teacher exclaims with enthusiasm, 'How beautiful is a clean child', or 'How beautiful is a graceful movement.'

The teacher now proceeds to a 'free' teaching. The pupils may leave their place, move about, work with whatever claims their interest, while the teacher addresses her criticism only to those children who are positively rough or who interfere with the comfort of others. Casually she commences conversation with different groups, asking the children for what evidence they gave of their school training at home on the previous day, questioning them as to how they helped their mothers, how they played and what games – in fact, talking freely about all the incidents in which they were the principal actors, but religiously avoiding any mention of intimate or of family affairs. A longer conversation of this sort takes place on Monday after the two days' vacation, during which their occupations and recreations outside of the house are discussed.

NEWSPAPER ARTICLES

Trained in conversation

This practice trains the child in an easy, natural, conversational style and proves also to be of real educational value, in as much as the child is prevented from repeating the happenings of his home, or the doings of his neighbors. By observing what material is avoided, the child soon comes to know instinctively what are appropriate topics of conversation.

Under the heading of practical exercises, it is fitting to deal with the proprieties of eating. In order to protect the health of the child, especially those belonging to families in which hygiene is not a study, it has been found beneficial to reserve the nourishment of the child, for the most part, to the school. The alimentation of the child should not be limited to the consideration of the fact that because of age, and a smaller body, he should eat less than an adult. There should be a real standardized diet for young children, which should be recognized as a most important factor of every elementary school system.

Gymnastics helpful

In further connecting up the classroom with everyday life, I have incorporated into these practical exercises a series of gymnastics destined to help the normal development of physiological movements, such as breathing, talking, etc., and to assist in muscular development when that has been retarded. These movements also assist the child to perform rapidly and gracefully the most common acts of life, such as dressing and undressing, reaching, lifting and carrying objects, and ascending and descending stairs. If there be an age when it is necessary to protect the child by special gymnastics, this age is from 3 to 6 years.

In 'physical culture' as an alimentation, there should be an adaptation to 'special conditions' and needs of the childhood. The child should not be considered as a little man, as under the prevailing physical training system, but as a prospective man. Because a man may use dumbbells in exercising does not signify that a child may use dumbbells of lighter weight, with benefit.

CALL AND POST

Article 11: 1 September 1915

Teacher should 'Teach' Little,

says Mme. Montessori

Rather Observe Child's Work

In the following article, Mme. Maria Montessori deals with the history, use, and importance of the didactic material employed in her method of child training. This is the eleventh of the splendid articles on 'Child Culture and Mental Hygiene', written especially for the Call and Post by Italy's great educator.

The articles have been translated by Ettore Patrizi, editor of L'Italia.

I have spoken repeatedly in previous articles of the importance of my didactic material and of its close connection with the philosophical aspect of my method. The selection of this didactic material has taken many years of careful study. Every object selected has had a particular aim, either to develop some mental faculty or to assist in the child's physical growth.

I have placed so much importance upon the material or equipment used in my classrooms that I have granted the manufacturing rights only to two concerns, one in Milan, a great philanthropic institution, under the auspices of the Società Umanitaria, founded and maintained by the fortune of A. Loria, and the other in New York, 'The House of Childhood'.

Must not tire child

The peculiar characteristic of the material is that every object must amuse and not tire the child. The combination of these two qualities goes to make the most successful material. Principally to such material, intelligently selected, I owe my fortunate results in auto-education.

One of the very first objects used by my elementary classes is the cylindrical inset, consisting of a long solid which contains ten holes, whose diameters vary about one-eighth of an inch,

NEWSPAPER ARTICLES

and ten corresponding cylinders. With it the children play a very pleasing game, especially little ones from $2\frac{1}{2}$ to 4 years old.

How to interest pupils

The child takes out the cylinders, and, having mixed them, tries to put them back into the proper holes. The exercise is a wonderful agent for educating the eye to the perception of different dimensions and for developing a sense of proportion. When a child is engaged in this little occupation, he is usually so absorbed that he drives away any one who interferes, even with the idea of helping him.

Naturally, the child makes many errors in the beginning, but he is so interested in his failures that it is not long before he commences to observe very closely the relative proportions of the hole and the cylinder. It is most interesting to note the mental process reflected in the child's facial expression. Sometimes he can tell at a glance that he is in error; again, not until he shakes the smaller cylinder against the walls of the hole. The point is, however, that he always repeats the exercise with growing interest until he is able to perform the exercise correctly and rapidly.

Corrects own mistakes

The great advantage of this particular piece of didactic material lies in the fact that the child corrects his own mistakes. This auto-correction intensifies his concentration on the difference in dimensions. When the child first shows assurance in performing the exercise easily and without error he has 'outgrown' it, and it ceases to be of any use to him.

In this proceeding it is not my intention to teach the child the conception of dimension by means of objects, nor to train the child to use the material without error. In this case my material would have the same significance as Froebel's, which requires the active co-operation of the teacher, whereas with my way the teacher must absolutely not intervene nor hinder the auto-correction and auto-education of the child.

CALL AND POST

Teacher must observe

The degree to which a child may become interested in the repetition of mistakes was demonstrated in one of my classes by a little girl 4 years old. The child had been trying all morning to put the cylinders in the right holes. I thought that I could distract her concentration by having the other children sing and march to lively music, but apparently oblivious to what was going on about her, she continued with her little task until she had surmounted her problem and had performed the exercise correctly.

I can not put too much stress upon the fact that a teacher must 'teach' very little, observe very much and, above all, direct the activities and the physiological development of the children under her. In fact, I would abolish altogether the name of 'teacher', substituting 'direttrice' instead. People used to laugh when I first used this word and would ask, 'When there are no subordinates, whom shall the "direttrice" direct?' The work of direction must be more profound and important than that of the generally accepted meaning. She must direct not only the movements but the lives and the spiritual development of the little ones.

In conclusion, the didactic material makes possible auto-education and permits the methodic education of the senses, but one should not confound the education of the senses with the notions which can be gathered from a given environment through the senses. This form of education can not rest upon the ability of the teacher, but must rely upon the didactic system.

NEWSPAPER ARTICLES

Article 12: 3 September 1915

Educate Senses of Child Early,

says Mme. Montessori

Prepare him for Practical Life

A more detailed explanation of the 'education of the senses' is the subject of the following article, the twelfth, in Madame Maria Montessori's great series, written exclusively for the Call and Post.

To the development of the senses Madame Montessori traces the greatest scientific discoveries, and even all esthetic and moral education.

The series on 'Child Culture and Mental Hygiene' is being translated from Madame Montessori's manuscript by Ettore Patrizi, editor of L'Italia.

The education of the senses has the added virtue of preparing the child for practical life. Heretofore we have had a very imperfect idea of what was needed in this direction. We have always started to work from the idea to application. In other words, the basis of all education has been that of teaching theoretically and then showing the relation to practice. Generally speaking, in teaching we 'talk' of the object which interests us and try to induce the pupil when we think that he has understood, to perform work upon, or in connection with, that particular object. But often the child who has understood the idea finds great difficulty with the execution of the work requested of him because his education is lacking in a factor of capital importance – the development of the sensations.

Sense torpor exists

For example, if we ask a cook to buy fresh fish, he clearly understands the idea that we want fresh fish, and he sets about carrying out our wishes. But if the cook has not had the sense of sight and of smell educated to that degree that he

CALL AND POST

recognizes the signs of the freshness of fish, he cannot satisfactorily perform his duty.

If we stop to consider, it is plain that all the adulteration of prepared foodstuffs is made possible by the torpor of the senses which exists in the masses. The frauds practiced in the food industry, like the frauds committed by swindlers, are the result of the ignorance and stupidity of the victims.

Educate senses early

Logically too much importance can not be given to the education of the senses, and that at a very early age. In all education we must have technique. I have discovered through long experiment that a detail of great value in the education of the senses lies in the possible 'isolation' of the particular sense which we aim to develop. Thus, the education of the sense of hearing can be accomplished most successfully not only in a silent environment, but in darkness. For the education of general sensibility I suggest the bandaging of the child's eyes, which, besides having the approval of experimental psychology, remarkably increases the interest of the children.

In order to test the acuteness of hearing, a fact that should be ascertained of every child in a class with exactness, I employ the empiric test. This is followed by a medical examination, that of the aphonic voice. Either the child's eyes are bandaged or the teacher speaks from behind his shoulder, varying the volume of the aphonic voice from different distances. I obtain the absolute silence of the class by closing the windows and shutters and having all the children lean forward, with their faces buried in their little hands. Then, one at a time, I call them by name. Every child awaits in the darkness for the low, mysterious voice which is to call him, with all the tension of his hearing power.

Touch sense important

In dealing with the education of the sense of touch, the different phases of this sense should be considered separately; for

NEWSPAPER ARTICLES

instance, the perception of heat, of weight, of relief and the degree of roughness or smoothness.

To exercise the sense of touch, it is an important part of the lesson to have the child wash his hands, using the classroom equipment of the little basin, soap, water and towels. Then another basin is used, containing tepid water, into which the child dips his hands again. The idea is to impart a sense of propriety, by the material emphasis of the fact with the tepid water, that no article must be touched unless the hands are clean.

The didactic material for developing the sense of touch consists of a rather long wooden board, half of which is covered with very smooth paper, and the other half with sandpaper. In addition I use bowls of water of varying temperature.

Process firm foundation

In dealing with the weight phase of the sense of touch I prepare several wooden cubes of a like size, but of different weights, owing to the difference in the qualities of wood used. The child commences by trying to feel the weight of each cube. At first he can not tell, but after a surprisingly short period he knows at a glance which are the heavy woods and which the light, and can sense the approximate difference of weight.

One may get the impression, perhaps, that many of the details employed in educating the senses are childish. As a matter of fact, every step is of the utmost importance, since by the gradual development and improvement of the organs and nerves of the senses we perform not only physiological education, but lay the foundation for psychological education as well. Upon the development of the powers of observation depends the future of all progress – of all science.

What are the wonderful discoveries of the X-ray, or the Roentgen ray, the vibration of radium, the Marconi wireless telegraphy, if not the result of keen, patient and persistent observation of natural phenomena? So far reaching is 'sense education' that even esthetic and moral education can be traced directly to it. How important, then, that we commence it before it is too late, before the damage has been done, the education of the senses in the formative period of childhood!

CALL AND POST

Article 13: 6 September 1915

Exercise the Senses in Children

Dr. Montessori method

Teach by Association of Ideas

The isolation of consciousness to the particular object under study, is the method advocated by Dr. Maria Montessori, for leading the child from sensations to ideas – and ultimately to the association of ideas.

In the following article, the thirteenth in the Call-Post series, the world's foremost educator of children again emphasizes the importance of 'sense education' as the basis of all education.

The series is being translated by Ettore Patrizi, editor of L'Italia.

'Train ... from the education of the senses to ideas.' – Ed. Séguin.

In my principle of education of the senses, I follow the plan of the great French educator, Séguin. The exercise of the senses, which becomes automatic, after continued repetition, leads to the improvement of the senses not only from a psychological standpoint, but in actual physical responsiveness and acuteness.

The aim of the teacher should be to lead the child from sensations to ideas, whether concrete or abstract – above all, to the association of ideas. This can be done most successfully with a method which isolates the attention of the child to certain perceptions. In other words, the teacher must endeavor to limit the field of the child's consciousness to the sole object of a particular lesson, somewhat similar to the way suggested in a previous article, when I dealt with the education of the senses, psychologically. The teacher must limit to an extreme degree her intervention, without allowing the child to become tired in any excessive continuation of effort.

Direct technique

A direct technique, however, is necessary in teaching exact nomenclature. The teacher must pronounce the names of objects

NEWSPAPER ARTICLES

in a loud, distinct voice, and scrupulously avoid the mention of any other idea or ideas. Here again my didactic material helps.

In the first exercise of this character the teacher uses smooth strips of paper and others of sandpaper. While the child touches one or the other, the teacher says of the respective strips: 'It is smooth' or 'It is rough', repeating several times the qualifying word with different modulations of voice, for instance, 'rough, rough, rough', and 'smooth, smooth, smooth'.

Similar proceedings may be followed with exercises relative to the sensation of heat, when using bowls of water of varying temperature (as stated in a previous article), as follows: 'It is cold', 'It is tepid', 'It is warm', etc.

Name and object

The lesson in nomenclature must consist simply in calling up the association of the name with the object, and the abstract idea which the name represents. For instance, the word 'heat', when used in connection with warm water, must impress the child's consciousness only with the idea of 'heat'. Therefore, no other word should be pronounced.

When some time has elapsed after the lesson, the teacher should test the child to see whether or not he has understood, asking him, 'Which is the smooth?' 'Which is the round? - the cold - the warm?' The child answers by pointing, and the teacher knows at a glance whether or not the association of ideas has taken place in his mind. If not, she should not correct him, but stop the lesson to start again at a more propitious moment, or on another day. In other words, to repeat the lesson, when the child has erred, means the forcing of the desired psychological association.

Accusation remains

By correcting him at once, with such words as 'You have erred', 'It is not thus, or so', we impress the child more with the words of the reproach than with the specific words of the lesson. Not the lesson, but the accusation, remains in his mind, retarding

CALL AND POST

the learning of the lesson and the grasping of the association of ideas. On the other hand, the silence that follows the mistake leaves intact the field of the child's consciousness, and the next lesson is more apt to be efficaciously superseded by the first.

With the old method, in which the education of the senses was not taken into consideration, it was the custom of the teacher to impart knowledge by stating facts concerning the qualities of the objects or ideas studied. For instance, in teaching the names of colors, the teacher failed to educate the chromatic sense, and the child's conception would be limited to the given example.

Compared with clock

If we wish to compare the child with a clock, we may say that in the old method, in order to make the clock run, we were compelled to use a finger to turn separately each little tooth of the wheels and gears. With the old method, the finger was the power that put the machinery into operation. In my method, the clock is wound, and the whole mechanism starts. The clock runs, because the machinery has been put into motion, and it no longer depends upon the person who did the winding.

NEWSPAPER ARTICLES

Article 14: 8 September 1915

Develop Sensibility in Infants

Dr. Montessori system

Class Work turned into Play

The development of personality, rather than the cultural idea, is the dominant note of Madame Maria Montessori's method of training children of the elementary grades. 'In the extent of this actual help to the infantile personality lies principally the art of education,' says the world's foremost educator.

The following article, translated by Ettore Patrizi, editor of L'Italia is the fourteenth in the splendid series, written exclusively for the Call and Post.

Our educational scope for the elementary grades must be that of helping the spontaneous development of the psycho-physiological personality of the child, and not that of giving culture. Therefore, after I have provided the child with the didactic material, repeatedly mentioned, and have adapted this material to provoke the development of the senses, the development of the powers of observation takes place as a natural sequence.

Infantile personality

In the extent of this actual help to the infantile personality lies principally the art of education. It is to this end that I have devised a few games or occupations, which have in their actual working out proven most useful.

The so called 'blind game' is applied particularly to the development of the general sensibility. In my didactic material there is an attractive holder, containing several rectangles of various kinds of cloth - silk, velvet, satin, wool, cotton and linen. The children touch the pieces, while the teacher mentions the respective names, adding the qualities of each kind, as thick, thin, rough, smooth, hairy, etc.

CALL AND POST

Then, one of the children is called and is placed at a table before the rest of the class. His eyes are bandaged and the pieces of cloth are handed to him, one after another. He feels them to ascertain their identity, and announces the names of each, with their respective qualities – for instance, ‘thick velvet’, ‘rough wool’, ‘thin silk’, etc., to the keen interest and amusement of the other children.

Whenever a strange material is given to the blindfolded children, such as a piece of paper, a remarkable expression of expectancy is on every little face. The same exercise is repeated with small weights, which we used in the development of the sense of touch.

Acuteness to vision

To give acuteness to the vision, and to develop a sense of proportion, three sets of the didactic material known as the cylindrical inset are used. One set is composed of cylinders all of the same height, but of different diameters; the second, of cylinders of like diameter, but of different heights; and the third, of different diameters and different heights.

After the child has exercised for some time with the different types of cylinders, the teacher picks out all the cylinders of the same height, but of different diameters, and puts them in a row on the table. Then she takes one from each extreme end and puts them side by side, to emphasize the difference in diameter, saying: ‘This is the largest’, ‘This is the smallest’. Next she places their bases together, to further illustrate the difference in diameter. The child is ready to give her ‘the largest’ or ‘the smallest’, as requested. Similar proceedings follow with the other sets of cylinders. The teacher asks for ‘the highest, the shortest’, etc.

Develop sense of form

In addition to these exercises, which develop the sense of proportion, I have devised a set which aim to develop the sense of form. Starting with the most contrasting forms, the square

NEWSPAPER ARTICLES

and the circle, the teacher shows the other simple forms – such as the rectangle, triangle, oval. She compares and illustrates the difference by placing the objects into corresponding grooves in a long solid, similar to the inset. To show that the sides of the square are all of the same dimension, she proves that the square may be put into its corresponding groove in various ways. The difference between the square and the oval or rectangle is shown by proving that the latter will not fit into the grooves except in one way.

Observation of form

This lesson may be interpreted by some as an attempt at teaching geometry, which, of course, would be a premature proceeding with children of the elementary grades. The accusation, however, is untrue, as the teaching of geometry deals with the analysis of form, and in my exercise there is simply an aim at the observation of form. In handling the objects no mention is made of sides or angles, as in the Froebel system. I repeat that I limit myself to the general observation of the form which is already associated with the things of the child's everyday life, as, for instance, the table is square, the plates round, etc. It is only fitting that the child should observe and be familiar with the nomenclature of these familiar shapes.

Effort to imitate

There is a common belief that a child, when left alone, or to its own resources, is resting mentally. If this were true, he would remain a total stranger to the rest of the world, whereas he is like a traveler in life, who observes and comments upon everything that is new to him. He not only makes spontaneous effort to understand, but to imitate.

CALL AND POST

Article 15: 10 September 1915

How to Teach Children to Write

Avoid Mental Strain

Dr. Montessori explains Method

The actual mechanism of teaching writing by the Montessori system is detailed in the following article, the fifteenth in the Call-Post series on 'Child Culture and Mental Hygiene'.

Madame Maria Montessori in the succeeding articles of the series, written exclusively for this paper, will develop separately the different studies, which together form the generally accepted meaning of education.

Ettore Patrizi, editor of L'Italia, is translating the series from Madame Montessori's manuscript.

Having laid the foundation for my method – the education of the senses – I shall pass to those subjects which, in the popular mind, have become the principal reasons for attending school, namely, reading and writing.

In the matter of teaching children to write, I discovered in the prevailing method the same fundamental error which existed in the teaching of discipline. In almost every part of the world where writing is taught, the strokes which are the foundation of the letters form the first lessons.

Great mental strain

Throughout my experience I have observed that the making of these successive strokes caused great mental strain to the child, a strain evidenced by the fact that, after the child has made successive rows across the page, there may be traced a decided tendency to curve the lines. I have also frequently noticed that when children are at play, writing with sticks or sharp rocks in the garden soil or on the damp sand of the beach, they never made straight, successive lines, or straight lines hardly at all. Their favorite figures are ample curves and circles variously drawn. So,

NEWSPAPER ARTICLES

if any line should be taught as a foundation for writing the alphabet, it is the curve rather than the straight line.

Avoid depression

It is true, that some of the letters of the alphabet are composed of straight lines, especially in the printed form, but the majority, in script, have a curve basis. I do not mean to say, however, that the successive curve exercise should be substituted for straight lines in teaching writing.

My objection rather, is that the method of dividing the composition of writing into component parts, such as curves and strokes, has absolutely no significance to the child. He executes them passively, until he becomes tired. And as the child learning to write by the ordinary method undergoes the added strain due to his first use of the pen, he is bound to make many errors. The continuous correction of the teacher logically follows, exerting an altogether depressing effect.

Trained in movements

As I stated in a previous article, I once succeeded in teaching a mentally deficient girl how to sew by simply having her imitate the operation of sewing – in other words, by making the movements. This experience gave me the idea which I use preparatory to teaching writing. It is nothing more than a tracing of sandpaper letters which in due time will help the child to write almost automatically.

Study the child

This led to the realization of the fact that in teaching writing it is not the object – in this case the writing – but the subject – the child who is going to write – that must be studied. I have also discovered that two psychological movements are necessary in writing: first, the handling of the instrument, and, second, the formation of the letters. It is my aim, therefore, to educate the

CALL AND POST

child in those two movements, so as to effect spontaneous action in writing, and gradually bring him to a point where he is able to write without ever having actually done so.

In order to provoke the muscular mechanism required by the first movement, that of handling the pen, I resort to an exercise most pleasing to the children, which consists in having them use a colored pencil to fill in certain geometrical figures – circles, squares, triangles, etc.

'Muscular memory'

To teach the outline of the letters, I try to fix in the 'muscular memory' of the child the shape of each letter. It is necessary, therefore, to perform certain exercises aimed to impart a 'muscular image' corresponding to the form of each letter, as in the case of a pianist or a 'touch system' typist, with notes and keys.

To this end, my didactic material includes a wooden alphabetical set of letters in script, three or four inches in height, and about a fourth of an inch in thickness. The set is enameled in two colors, the consonants in blue, and the vowels in red. Several large cardboards on which are painted letters corresponding in color and dimensions to those of the wooden set and grouped together according to certain contrasts and similarities of shape, are used in this exercise.

Corresponding picture

In addition, there is a corresponding picture to every letter of the alphabet, showing some object beginning with that respective letter. The picture also contains the script letter painted in the same color and size of the letter in the wooden set. The letter painted in the smaller size in printing form, also appears on the picture.

This picture serves to fix in the memory the sound of the letter, whereas the small painted letter near the script shows the simple transition from handwriting to printing. Certainly the idea of the picture is not new, but the combination has proven most valuable, as I shall show in my next article.

NEWSPAPER ARTICLES

Article 16: 13 September 1915

Learn Writing Without Writing

Dr. Montessori method

System Pleasure for Children

The completion of the Montessori writing lesson is given in the following article, the sixteenth in the Call and Post series on 'Child Culture and Mental Hygiene'.

As in the teaching of all other subjects, Madame Montessori, who has revolutionized education throughout the civilized world, insists upon the preparation of the child to the end that the actual performance of the lesson is spontaneous and almost automatic.

The series is being translated by Ettore Patrizi, editor of L'Italia.

As I outlined in my previous article, in the teaching of writing I adopted didactic material consisting of a set of wooden letters in script; cardboard letters of the same size and color, and pictures representing objects whose names began with corresponding letters, which were also painted in one corner of the picture both in script and in printing.

I obtained very good results with the method of having the child put the wooden letter on top of the corresponding letter painted on the cardboard, aiming to completely cover the former. The child then traces the outline of each letter with his finger. In this way his hand follows the movement necessary to write the respective letters, and in a comparatively short time the child comes to know how to make all the movements necessary to write the letters of the alphabet, without any reference having been made to writing.

Prepares hand to write

But there is as yet one step missing in this exercise. It is the preparation of the child's hand for the movement of handling

CALL AND POST

the pen. To this end I added another little plan, that of having the child use his middle finger in addition to the index finger already mentioned, for the reason that in handling the pen the child uses these two fingers.

The next step is the removal of the wooden set. The child is now given a little stick with which to trace the letters painted on the cardboard. I followed this system for some time, when I observed that the child in going over the formation of the letters with a stick found some difficulty in keeping to the outline of the letter. I therefore substituted deeply engraved letters so that the child's hand was automatically guided in tracing. Afterward I devised a cheaper and better method and replaced the engraved letters by letters cut out of sandpaper and pasted on smooth cardboard of a contrasting color.

Pleasure for child

When the child traces these sandpaper letters he knows instantly when he has digressed from the line, as he misses the distinctive rough feeling. The child finds considerable enjoyment in going over this exercise, which he repeats with closed eyes until the image of the letter is well fixed in his 'muscular memory'. The teacher is then ready to question him, and asks for certain letters, saying: 'Give me "O" ' or 'Give me "A" ' which the little one picks out easily, recognizing them both from vision and from touch. This preparation of the movements of the hand in writing has wonderful results. I have had examples of whole classes of children learning all the letters of the alphabet after only a few days' practice with this exercise. It has frequently happened that the child long before writing was suggested, felt a natural impulse to imitate the letters, and to actually 'construct' the sandpaper forms that he had traced with his fingers or with the stick. The child writes almost automatically.

Soon learn to write

In teaching the combination of letters, or the formation of words, I prepare several sets of letters and place all the copies

NEWSPAPER ARTICLES

of each letter in separate pigeon-holes, arranging them in type-cabinet fashion. Now the child is ready for the actual composition of words. The teacher pronounces very distinctly the most simple words and calls for each letter composing that word. The child takes the letters from the pigeon-holes, and upon the completion of the exercise replaces them.

The facility with which the child comes to compose the words is surprising. It is almost an impulsive act. The children thus learn writing without writing, and the moment they leave the general exercise they are ready to put it into actual practice. Furthermore, they write at once, without the usual imperfections of each letter, but with the exactness of the sandpaper models.

CALL AND POST

Article 17: 15 September 1915

Discard Primer with Children

Dr. Montessori method

'Automatic Process' Effective

The fundamental difference between reading and writing, which are erroneously taught under the prevailing system of education as concurrent subjects, is emphasized in the following article – the seventeenth in the Call-Post series on 'Child Culture and Mental Hygiene'.

Mme. Montessori, as in her previous articles, discusses the 'automatic process' of learning. The child is so well prepared, and the work made so pleasant by the use of attractive didactic material, that reading becomes a spontaneous, almost an impulsive act.

Ettore Patrizi, editor of L'Italia, is translating the Montessori series.

My experience has been that a child usually takes a month from the time he is given the elementary exercises until he writes the first word. When the child begins to write, the teacher naturally watches his progress, encouraging him when he hesitates and inducing him to repeat the operation of touching the sandpaper letters without directly correcting the writing.

The child then improves in writing, not by repeating the actual writing, but by repeating the movements preparatory to it.

Notwithstanding the preparation for the teaching of writing, which in a way is a general preparation for reading, the period of instruction needed to teach reading is somewhat longer, because it requires superior intellectual development of the child, and it is essentially mental work, whereas writing is essentially mechanical.

NEWSPAPER ARTICLES

Not mere repetition

I do not consider reading the mere repetition of the words which the child makes in the writing exercises, since so far what he has written is only the signs of sounds. Reading must be understood as the interpretation of an idea from graphic signs.

The child who we may say is really able to read is one who, never having heard the word dictated, recognizes that word when he sees it composed of movable letters. Furthermore, he understands its meaning and can pronounce it with the correct phonic accent.

It is needless to say that in my method I entirely abolish the primer. The didactic material used in teaching reading consists of large cards and various kinds of toys. Experience has taught me that there is a remarkable difference between reading and writing, and that there is not an absolute concurrency between the two acts. Although it may appear strange, writing precedes reading.

Pleasant for kiddies

My reading exercise proceeds in the following manner:

On several small sheets of ordinary paper the teacher writes a different word, well known to the children through necessary use in everyday conversation. These words are the names of objects either present or of objects firmly established in the child's mind through contact at home. When the word corresponds to some object near at hand the teacher shows the child the respective object, usually some toy, an important feature of the didactic material used in reading.

I do not commence with 'easy' or with 'hard' words, because, as I said, the children already know the words that have been given them as child then slowly translates into sound the written word, and if the interpretation is exact the teacher should limit herself to such expressions as 'more quickly' or 'hurry'. The child reads again and again, each time with more rapidity, often without understanding, until finally, so to speak, he guesses the sense of the word, always displaying a great deal of real pleasure and satisfaction.

CALL AND POST

Games with lessons

This exercise is repeated with different words which invariably represent either some present or some well-known object. After the child has read a word the teacher lays the little card on the corresponding object and the exercise is over.

In connection with the reading exercise I employ a little game which makes it clearer and at the same time more pleasant. The teacher places on a table the most varied and attractive toys. The name of each is written on one of the little cards, which is rolled up and placed in a box. The children one after another, draw a card and go back to their places. Each child slowly opens his card and reads it mentally, without showing it to the other children. Then, rolling up the cards, the children again come to the table and, in a clear voice, point to the toy they mean and give the card to the teacher for her verification. Such a card then becomes like money or an order, by which the respective toy is procured by the child for the time being.

This constitutes the whole reading lesson and furnishes a system whereby all the annoyances of the primer are buried, together with the copy-books and their successive straight strokes, used in teaching writing by the prevailing method.

NEWSPAPER ARTICLES

Article 18: 17 September 1915

Children Learn to Read Early

by Montessori method

Find Pleasure in School Work

The development of the Montessori reading lesson, which at first consists in teaching the child to associate familiar words with their corresponding symbols, is accomplished by teaching phrases just as familiar in everyday life. Madame Montessori, Italy's famous educator, in teaching reading, as in all other subjects, makes use of the obvious; the child's home environment, and the things that are essential to his very existence.

Ettore Patrizi, editor of L'Italia, is translating the series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post by Madame Montessori.

From the reading of words described in my previous article, the exercise passes to the reading of phrases by practically the same method. Its success, evidenced not only by the interest and pleasure of the children, but by the unusual rapidity with which they arrive at actual reading, far exceeded my own expectations.

I remember an episode which illustrates how spontaneously and almost automatically the children learn to read. Among the children attending my first school in Rome was the 4-year-old son of an Italian nobleman. This gentleman used to receive a great quantity of mail. One morning as the little boy took the mail from the servant his father noticed that he passed the letters through his hands, studying each address as he did so.

Reads in fifteen days

Although the gentleman knew that his son was attending my school, yet he did not have any particular faith in the merit of the new system of training and was far from convinced that there would be any immediate results. One can imagine his

CALL AND POST

astonishment, then, when the little boy read the address of each letter of the large package as he passed them to his father. The boy had taken only fifteen days to learn how to read, the average time required by the normal child. Throughout my experience I found that the great majority of normal children commenced to write at the age of 4 years, and at 5 they knew both how to write and to read – at least, as well as children who have finished one year of the ordinary school, usually at 7 years.

The exercise of reading the words from the little cards is repeated with phrases, with which the interest and eagerness of the children increase. A good deal of the success is due to the selection of appropriate phrases which strike the attention of the child and are limited to ideas within the province of his knowledge.

Interest for children

Phrases of the following character proved most satisfactory: 'Close the blinds of the windows', 'Open the door', 'Wait a moment, and then arrange them (blinds and door) as before', 'Ask eight of your schoolmates to leave their places and to line up two by two in the middle of the room', 'Ask them to walk forward and backward on tiptoe, without making any noise', 'Ask as a favor three of your schoolmates who can sing well to come to the middle of the room, arrange themselves in rows and sing a song of your selection which they all know'.

While the teacher writes these phrases on a card, the children eagerly await them, and as soon as they are received they are read with profound silence. In my first experiments I would ask the children whether or not they understood what was written, and their answer was usually in the affirmative. Then I would ask them to act according to the written directions, and a wonderfully interesting scene followed. One child went to the window and closed the blinds, another opened the door, a third called to his schoolmates, etc. The most astonishing feature of the lesson was that everything was accomplished in the most orderly manner, and in silence. It seemed as if some magic force had influenced these children.

NEWSPAPER ARTICLES

Novel reading exercise

They even showed gratefulness to the teacher for the satisfaction of the realization that while they were learning they were thus enjoying themselves so thoroughly.

These first successful experiments afterward became an important part of my system for the teaching of many other branches. The reading exercise is now performed in the following manner:

I obtain a profound silence in the classroom. A number of little rolled-up cards, each containing a different phrase describing an action which the child is supposed to perform, are placed in a box. Every child is given one of these cards, which he reads carefully one or more times until he has thoroughly understood the meaning. Then, the cards are given back to the teacher and the children start to carry out the written instructions. Everybody starts to work with pleasure and interest. Some of the directions require the cooperation of other children, or the moving from place to place of the different objects. The school suddenly becomes a little 'atelier' or workroom, wherein everything proceeds with remarkable order and silence as far as the children's voices are concerned. The whole scene furnishes a splendid example of the discipline of which I have so often spoken.

Reading mental process

I place particular emphasis upon the fact that in this exercise the children did not read vocally, but only mentally, as is the natural way. When you wish to deduct a meaning in reading, it is a mental, not a vocal process. In fact, reading with a loud voice requires the exercise of two mechanisms of speaking, one articulated, the other graphic. Therefore the work is made more complex. Adults who have to speak publicly prepare themselves by reading the matter over mentally first. For children who are just commencing loud reading is a confusing action, as in order to interpret the thought they must first read mentally. Graphic or expressive speaking must be separated from the articulated language when it rises to logic thought.

CALL AND POST

Graphic language transmits thought at a distance, while the senses and muscular mechanism are silent.

NEWSPAPER ARTICLES

Article 19: 20 September 1915

Arithmetic Lessons Practical

Dr. Montessori method

Coins are Used for Counting

The teaching of elementary arithmetic, that of simple enumeration, by the Montessori method, is delineated in the following article as part of the series on 'Child Culture and Mental Hygiene' appearing exclusively in the Call and Post.

Madame Montessori, Italy's great educator, in arithmetic as in all other subjects, makes use of the child's everyday experiences, and the objects with which he is most familiar.

Madame Montessori's series is being translated by Ettore Patrizi, editor of L'Italia.

In teaching arithmetic I utilize the little knowledge that the average child has of the subject before attending kindergarten — that of counting up to four or five. This elementary enumeration is learned very easily, since the child's everyday life offers any number of opportunities to become acquainted with counting.

In teaching this first form of enumeration I use money, if possible 'new', but often simply little cardboard discs, painted so as to represent silver and copper coins. The process of changing money is in itself sufficiently attractive to call in a vivid way to the child's attention. An assortment of pennies or 5 cent pieces is presented to all the children of the arithmetic class, by means of which they readily learn to count up to ten.

Money method practical

I do not know of any other method more practical than that of using money, since money is an everyday factor in the lives of rich and poor, young and old. Children of all classes feel the significance of it almost instinctively.

In addition I use didactic material similar to that described for the teaching of other branches. For instance, I employ ten

CALL AND POST

little wooden rods, whose lengths range from four to forty inches, each one divided up into equal sections of alternating colors – red and blue – four inches being taken as the unit of measurement. The ten rods are placed on a large table, so that their ends start at a given line. They are arranged one above the other in the order of their respective lengths. Commencing with the shortest, the child is asked to count the color sections in every rod. Automatically he follows the alternating color sections, counting 'one' for the first rod, 'two' for the second rod, and so on until he has completed the ten sections.

Novel counting plan

Here again, we take advantage of the exercise which has been used so effectively for developing the sense of proportion and dimension, combining it with the exercise for teaching enumeration.

The teacher mixes all the rods on the table, and picks out one of them, which she shows to the child and asks him to count the color sections. Then, he is asked to give the rod next in length. The child usually picks out the required rod at a glance, but the teacher verifies whether he has guessed or really knows, not by comparing the two rods, but by having the child actually count the color sections. This exercise can be repeated indefinitely until all are thoroughly acquainted with the numbers.

Should the child already know how to write according to previous lessons, he soon learns how to read and then write the numbers, by following the same system mentioned for ordinary reading, especially the feature of the numbers cut out of sandpaper, and the principle of tracing them, with the fingers or a little stick. The usual exercise follows: the teacher pointing out each number as she says: 'This is one', or 'This is two', etc., and afterwards, 'Give me one', 'Give me two', or asking, 'What number is this?'

'Zero' difficult problem

So far, we have dealt only with actual numerical values, but now we come to the significance of 'zero', one of the most difficult

NEWSPAPER ARTICLES

problems to the child's mind. In many instances the child, knowing the values of the different figures, asks himself, 'What is the meaning of "zero"?' The teacher must make the little one feel that 'zero' means nothing, and the next step is to make him feel what 'nothing' means. To this end I use various exercises which have proven most stimulating to the child's imagination.

Going into a classroom, I address a pupil who has already completed the foregoing figure exercise, in this manner: 'Come, dear, come to me zero times.' As a rule the child comes immediately to me, and then I add, 'But, my child, you have come one time, and I told you to come zero times.' The curiosity and anxiety of the whole class is then thoroughly aroused. 'What shall I do?' the little one asks, most puzzled. I reply, 'Nothing; zero means nothing.' Again the child asks, 'What must I do to do nothing?' My answer is, 'Do nothing. You should have remained in your place, perfectly still. You should not have come to me one time, but zero times.'

Another common exercise to show the significance of zero is as follows: I say to one of the pupils, 'Now, dear, with your little fingers throw me zero kisses.' The child looks in astonishment, smiles, and keeps still. The teacher then asks, 'Did you understand? Throw me zero kisses.' Immobility yet, and general laughter among the other children. Then I raise my voice as if in anger at the disorder of the class, and addressing one of the children, I command, 'Come here, zero times.' Still no movement. Finally with a sorrowful and almost complaining voice I ask, 'Why do you not come to me; why do you not throw me a kiss?' Their answer usually is, 'But you said that "zero" means nothing. So, why should we move, or throw you a kiss, or come to you?' 'Oh, yes,' I reply, 'you are right. But, now come to me all of you, one time', and the whole class rushes eagerly to my desk.

CALL AND POST

Article 20: 22 September 1915

Amusement and Education Mix

Dr. Montessori method

Kiddies take Interest in Work

The elemental operations of arithmetic – addition, subtraction, multiplication and division – are taught under the Montessori method, just as simple enumeration is taught, by means of vividly colored rods, employed in exercises which give an actual materialization of these different operations before the child's very eyes.

Madame Montessori, whose system of child training has renovated our ideals of education, in arithmetic, more conclusively, perhaps, than in any other branch, demonstrates her theory that one must see with the physical eyes, and the eyes of the intuitions, before attaining clear vision with the eyes of the intellect.

Madame Montessori's series on 'Child Culture and Mental Hygiene' appearing exclusively in the Call and Post, is being translated by Ettore Patrizi, editor of L'Italia.

The didactic material used in teaching the primary operations in arithmetic – addition, subtraction, multiplication and division – is identical with that described for use in the teaching of enumeration, namely, a set of ten rods divided into alternating color sections, whose unit of measurement is four inches. These rods are designated according to the number of color sections they contain, as 'rod one', 'rod two', 'rod five', etc. They are disposed of in the order of their length, that is to say, in the order of their numeration.

The first exercise consists in grouping the rods shorter than ten, so as to total that number, by means of two combinations, as, for instance, one and nine, two and eight, seven and three, and four and six.

Child learns to add

This work can be done through the following orders given to the children: 'Take number one and add it to rod number nine.'

NEWSPAPER ARTICLES

Addition is accomplished by joining the two ends of the respective rods. Again, 'Take number two and add to number eight', or 'Take number four and add it to number six.'

Thus with this exercise we have several groups of rods whose lengths are identical, for the reason that they all total ten color sections. This materialization of addition remains so impressed upon the child's mind that he very quickly learns to add correctly up to ten. With the same process the child also indirectly learns subtraction, because, after the first exercise is performed, he is required to discompose the completed rod and to arrange the smaller rods in their original order. The child thus sees at a glance that by taking away rod number three only rod number seven remains. From this he very naturally infers that ten less three equals seven. In the same way he removes rod six and observes that only rod four remains, impressing him with a like inference, that ten minus or less six leaves four.

Interest in work

Rod number five we must consider separately. The teacher takes any combination of rods whose total is ten. She next takes rod number five and by placing it at the end of the rod totaling ten shows that rod five is exactly half, by redoubling it across the length of rod ten. In other words, the teacher proves to the child that it takes two rods the size of five to equal one rod of the 'ten' size, and hence five and five are ten.

Indirectly the child also learns multiplication, since he sees that two times five are ten. Incidentally, also, the way is paved for division, since he observes that ten halved, or divided into two parts, gives as a result two 'fives'.

Exercises amusing

After the child has become familiar with these simple exercises, which amuse him greatly, he himself goes on almost automatically in the formation of new combinations, somewhat more complicated. For instance, he may take three rods

CALL AND POST

to total ten, as two, three, five; or one, four, five; or three, six, one.

Arrived at this stage, there is now nothing to prevent us from developing the exercises to include numbers beyond ten. Eight is coupled with five, nine with seven, etc. In other words, we can make use of the rods to form combinations up to twenty, and thereafter by similar process indefinitely.

NEWSPAPER ARTICLES

Article 21: 24 September 1915

Give Child Liberty in its Studies

Dr. Montessori method

Old-time 'Teacher' now Passing

In the following article Madame Maria Montessori summarizes the organization of her classes, the steps in elementary education, the didactic material and equipment used, together with the principal differences between the Montessori method and the prevailing scholastic system.

The great Italian educator again emphasizes the underlying principles of independence, liberty and self-reliance in the training of the young child as the solution of educational as well as social problems.

Madame Montessori's splendid series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post, is being translated by Ettore Patrizi, editor of L'Italia.

At this point in my series on 'Child Culture and Mental Hygiene' it is wise to briefly summarize the actual steps in elementary education, which may have become somewhat confused in the descriptions of the accessory didactic material and schoolroom equipment.

The training of children under any method commences with exercises drawn from their everyday life, such as moving and lifting the small tables and chairs and other pieces of ordinary furniture adapted both in size and weight to the physical development of very young children.

Personal cleanliness and general propriety is introduced by such exercises as washing the face and hands, combing and brushing the hair, wiping off soiled shoes, dressing and undressing. These are followed by practical demonstrations in household order, including dusting and the arrangement of furniture.

CALL AND POST

Aims to interest child

The lessons are all conceived with an idea to interest and to amuse the child. I am convinced that they accomplish both of these aims effectively. The old-fashioned toy succeeds in attracting only for the moment, and the proof that they have not reached the deepest consciousness of the child lies in the fact that destruction is the fate of most toys after but a very brief service.

Exercises designed to develop the senses follow next in order. Such material as the cylindrical inset and the varied colored cube set are employed. For the first time the child's attention is definitely fixed in concentration, and the first comparisons are made, developing both a sense of proportion and of dimension. Auto-correction, a very important feature of these lessons, is effected by the child's perseverance to perfection, through repeated errors.

Uses didactic material

Other exercises of this class are those based upon the thermic or touch sense. Water of varying degrees of heat, and cloth ranging from an extremely smooth to a very rough surface are used to develop both physiological acuteness and psychological responsiveness of the senses.

The teaching of the simple scholastic subjects – reading, writing and arithmetic – is accomplished by means of similar didactic material. In reading and writing, an alphabetical set cut out of sandpaper, is used to guide the child's fingers in tracing the letters as a preparatory movement. The decisive impression made by the contact of the sensitive fingertips with the rough sandpaper helps to fix a lasting mental picture of the letters outlined.

Enumeration, the first step in arithmetic, is taught by the aid of a set of ten rods of varying length, divided into alternating color sections, whose unit of measurement is four inches. Addition, subtraction, multiplication and division follow, and are materialized for the child by means of the same material.

NEWSPAPER ARTICLES

How methods differ

The rods fulfill the same function in the teaching of arithmetic as do the sandpaper letters in reading and writing. The development of more complex exercises from the simple operations given follows almost automatically. In other words, the child's mind has been prepared for difficult calculation and computation before he ever attempts the most simple problem.

Glancing back over the series, the salient differences between my method of teaching and the prevailing system may be enumerated as follows:

Teacher is guardian

With my method the teacher, as ordinarily understood, has disappeared. There is no longer need of the poor, overworked woman who wears out her very life in preserving at all costs the silence and immobile discipline of a large class of buoyant children. For the teacher I have substituted didactic material, which contains the principle of the control of error and permits the child both auto-education and auto-correction. Therefore, the teacher under my method becomes a director of the spontaneous actions of the child, which are unlimited except in so far as they interfere with the rights of others. The teacher becomes the patient and practically silent guardian.

Give child liberty

The child consequently is left in comparative liberty and independence. He is not taught nor helped directly by the teacher, but is merely shown to avail himself of 'self-help'. From this working basis we may expect the positive solution of the great problem of education, which in harmonizing the environment of the school with that of the home, between which there has heretofore been a marked barrier, will also correct many of the underlying fallacies of social life.

CALL AND POST

Article 22: 27 September 1915

Awaken Social Sense in Children

Dr. Montessori method

Effective Discipline is Indirect

In summarizing the elements, organization and the work of a Montessori class, the subject of discipline as obtained through the use of didactic material is further developed today by Italy's great educator.

'Discipline,' says Madame Montessori, 'must be reached indirectly - not by facing the error and combating it.'

The following article in the series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post by Madame Montessori, is translated by Ettore Patrizi, editor of L'Italia.

As wonderful as have been the results obtained with the use of my didactic material in the teaching of scholastic subjects, when pupils of the youngest years are helped to read and to write in an incredibly short time, I do not hesitate to say that the results with which I have been most satisfied personally, were along the lines of the development of concentration, and the awakening of the social sense. In other words, my didactic material has been most effective in obtaining real discipline.

Whenever strangers have visited my classes in Italy, or those conducted by my trained teachers in America, they have invariably been impressed with the perfect preoccupation of all the children in their work, and the freedom from a frivolous attitude.

No whispers heard

They observed classes of from forty to fifty little children practically left to their own initiative in pursuing different occupations. Some performing the exercises designed to educate and develop the senses; some tracing the sandpaper letters,

NEWSPAPER ARTICLES

preparatory to reading and writing; another group going through their lesson on order, cleanliness and propriety by arranging and dusting the furniture, etc., and still others training their faculties of perception with the absorbing cylindrical inset and cube exercises.

During all these various activities the visitors could not help but observe the freedom of the whole classroom from any suggestion of deceptive whispering, or that undercurrent of mumbling that prevails in the ordinary schoolroom.

Enthusiastic in silence

To the contrary, all the children were eagerly and enthusiastically working at their different tasks, in an orderly silence, which was interrupted only by the necessary noise of moving objects and the handling of material.

Now and then, perhaps, there was an exclamation of pleasure and enthusiasm addressed to the teacher, or to the other children, when a child was proud of what he had accomplished. Often one heard, 'Madam, madam, see what I have done', or 'See what I have made.'

Throughout the class session the concentration of the children is remarkable. The teacher, or rather the directress, walks about slowly and silently, waiting to help those children who may ask for any explanation or for her assurance that they are doing their work correctly.

Disputes are few

She is called upon for admiration of their efforts more than for any other reason. Sometimes, for the whole day, the children never notice the teacher, acting as if she were absent.

There is seldom any dispute among the children in regard to the possession of different toys or objects. The attitude seems to be one of absolute harmony.

Whenever one of the children accomplishes something which strikes him as extraordinary, his joy is shared by all of his classmates. No one seems to be jealous of his pleasure, but the

CALL AND POST

triumph is invariably a stimulus and encouragement for the other children.

It is remarkable also how the child of 3 works side by side with the child of 7. For the same reason that the younger child is not jealous of the superior height of the elder, he is not jealous of the older child's superior mental attainments.

Discipline indirect

Should the teacher speak to the class as a whole, the children instantly stop their work and direct their attention to her. Just one word or gesture suffices to draw their attention and to obtain an immediate response.

Before leaving the subject of discipline, I would emphasize the folly of trying to obtain it by reproaches or even persuasive speech. This method may apparently give good results at the beginning, but soon the discipline obtained in this manner proves of no efficacy.

The dawn of discipline must come with concentration and interest in work adapted to the child's own age and development. Discipline must be reached through the spontaneous action of the child. Furthermore, it must be obtained indirectly, and not by facing the error and combating it.

NEWSPAPER ARTICLES

Article 23: 29 September 1915

Develop Initiative in Children

Dr. Montessori method

Auto-correction Proper System

An interesting episode, illustrating the development of initiative through the Montessori method, is given in the following article in the Call and Post series on 'Child Culture and Mental Hygiene'.

The use of household articles, which hold in themselves the principle of auto-correction, is again advocated by Madame Montessori, Italy's famous educator. 'One of the greatest fallacies mistaken for economy is the depreciation of human rights and the overvaluation of property rights as manifested in the use of especially adapted articles for children,' says Madame Montessori.

The series is being translated by Ettore Patrizi, editor of L'Italia, from Madame Montessori's manuscript.

As much as has been said for my method in its successful training of the child in active discipline, and its consequent fitting him for social life, or for the ease and rapidity with which scholastic subjects are acquired, my great underlying idea is the development of initiative.

Among the many episodes most illustrative of the manner in which my method actually develops this priceless quality, I found one quite recently in the 'Casa dei Bambini', my demonstration class in the Palace of Education, at the Panama-Pacific Exposition, to be strikingly significant.

I was seated outside of the glass-enclosed schoolroom, when I observed a little girl of probably 4 years of age, carrying a tray, which contained six small glasses full of milk. She was playing waitress in the table-setting lesson, and in carrying the glasses from the cupboard to the children seated at the table she dropped one of the glasses.

CALL AND POST

Lesson in initiative

The milk was naturally spilled on the rug. For a moment the little girl was perplexed, and looked around for some word of advice or for active assistance. The teacher preserved her pleasant expression and acted as if she were absolutely unconscious of the accident. She offered no help. Like a flash I saw that the little girl suddenly realized that she must depend wholly upon herself, that she must solve her own problem.

The child set to work with determination and picked up all the little pieces of broken glass, laying them aside in a heap. Next she went to the closet for a cloth and soaked up the milk. While she was rubbing the wet spot dry, to my great pleasure, she examined the rug closely to find that there were other spots besides the one which she had made. To these, also, she applied the cloth, giving them all a most vigorous scrubbing.

Progress in error

This done, in the most unconcerned and matter-of-fact way, she carried the glasses to the table, put away the tray and replaced the empty glasses in the cupboard. The little heaps of broken pieces was next removed. Finally her attention was called to other glasses which had been carelessly left about the room, and, once started in her zealous mission of order, she was not satisfied until they had all been put in their proper places.

Thus, through a simple error, the little girl learned not only the valuable lesson of order, but was on the way to unlimited development of initiative. Consider how many mental steps, how many original actions, resulted from the necessity of self-help. Had this little girl been reproached and the accident righted for her, these all would have been lost. Or if she had been merely reproached and had been told what to do, she would have obeyed only after listless fashion.

Another feature of this episode of the broken glass must also be noted. The child was given an article which held the principle of auto-correction. She was given glass instead of tin or an unbreakable metal. The emergency with its attendant

NEWSPAPER ARTICLES

development of initiative could never have occurred had the little girl carried a tin cup especially manufactured for children. One of the greatest fallacies mistaken for economy is the depreciation of human rights and the over valuation of property rights as manifested in these 'specially adapted' articles of household necessity.

CALL AND POST

Article 24: 1 October 1915

Back to Nature Teaching Child

Dr. Montessori method

Give Kiddies Natural Freedom

The following article is the last of the series on 'Child Culture and Mental Hygiene', written exclusively for the Call and Post by Madame Montessori.

The conclusions and aims of Italy's great educator, and the service to humanity which she hopes to accomplish through her method of child training, are summarized for Call and Post readers.

Ettore Patrizi, editor of L'Italia, has translated the series from Madame Montessori's manuscript.

Before closing this series of articles on 'Child Culture and Mental Hygiene', in which I have attempted only to define and not to minutely explain my method, I wish to summarize my impressions and conclusions of its significance and aims.

Those who have caught the soul of my method will find it easy of practice, because they will understand the real relation of the exercises and material to the child. They will know that whatever the child may receive from the outside must serve only the purpose of arousing the inner consciousness and sufficient initiative to work out the development of the child's personality. This central fact accounts for the most striking differences between my method and the old scholastic system, especially the new type of teacher, who is merely an observer and directoress of the spontaneous actions of the child. It will explain, perhaps, why the child becomes the real teacher, insisting that through auto-education the child has continuous recourse upon himself.

Made to enjoy work

The rhythm of life is the harmony existing between the exterior and interior forces. The human texture is not less plastic than

NEWSPAPER ARTICLES

vegetable texture. When a growing plant is removed from the soil and put into the unnatural environment of a vase, it soon loses that vigor which helped it to contend with the antagonistic forces of its natural environment.

My method – the product of observation and experience – takes into consideration and helps the spontaneous psychic development of the child.

Just as the hygiene of the body causes the child to feel the joyousness of physical well-being, so the intellectual and moral hygiene brings the child to a joyousness of the spirit. And, my method working from this belief, presents impressions to the child, merely as so much raw material, to be translated and molded into an expression of himself. Thus the child enjoys a sort of personal experience, both in the material environment and in the intimacy of his soul.

Children are free

The 'Casa dei Bambini' represents a new educational principle, where children working individually conquer error and attain to intellectual sympathy and freedom in practical life, through the process of active discipline. There is a joy among the children of my classes, shared in common with everything that blossoms in freedom. Even casual visitors to the 'Casa dei Bambini' sense a peculiar influence. I have known men oppressed with the cares of business, which had almost taken complete possession of their minds, feel their rigidity melt away and realize perhaps for the first time the strength of Christ's words 'He that shall become like unto these, my little ones, shall be the greatest among you.'

Returns to nature

They were given a visible manifestation of Wordsworth's ennobling belief, that the secret of all life is hidden in the soul of the child, and that the child is the synthesis of all nature. They felt the presence of that spirit which 'lies about us in our infancy', the spirit which becomes 'obscured by the shadows of

CALL AND POST

jails', gradually fades away in the growing child and dies in the man. Truly, our social life is nearly always a continuous darkening of this spiritual flame. My method aims primarily to keep it alive, and to preserve that 'oneness' with nature, in spite of the heavy yokes which life forces on us. It is a method based upon the high conception of Emmanuel Kant – 'The perfect art returns to nature.'

NEWSPAPER ARTICLES

An announcement appeared in *Call and Post* of 16 August 1915 of Montessori's talk on 'My System of Education' at the National Education Association conference. It was followed by an extensive excerpt from her talk.

N.E.A. Convention is Opened in Oakland

With the largest attendance of teachers in its history, including educators of world fame from twenty-seven foreign countries and from every state in the Union, the National Education Association opened its International Congress of Education at the Municipal Auditorium in Oakland today.

The civilized world, represented by men and women whose names are written high in the annals of education and progress, began its two weeks' symposium during which every phase of the modern school in its bearing on the child, the teacher and the welfare of nations will be discussed.

15,000 attend

More than 15,000 members of the association are in Oakland to attend the convention, and when Dr. Joseph Swain, president of Swarthmore College, Pennsylvania, and vice president of the National Education Association called the first meeting to order this morning the Municipal Auditorium which has a capacity of 10,000 was crowded. Music was furnished by the elementary school bands, and the reading of the Twenty-fourth Psalm by Miss Nancy Cattel of the College of Speech Arts, Denver, formed the invocation.

Short addresses of welcome were given by Governor Johnson, State Superintendent of Schools Hyatt, May Davie of Oakland, Superintendent A. C. Barker, President Moore of the Exposition and Director of Congress James A. Barr.

Davie welcomes educators

Welcoming the delegates, May Davie said:

CALL AND POST

May you fully realize our appreciation in seeing the gathering here of an organization whose efforts and achievements so affect the welfare not only of this city and county, but of the whole world.

Some may think and talk reform, new systems of government may be evolved, but we have yet to discover a means of uplift that will take the place of education.

Today, while a great part of the world is totally given up to the munitions of war, we of Oakland, on the shores of the peaceful Pacific, are welcoming to our midst an organization devoted to the most noble cause of uplift by education. May the beauty and grandeur of your meeting place make this convention long remembered for its successful achievements.

Teaching to win place

A. C. Barker, Oakland city superintendent of schools, said:

The day is not far distant when teaching will receive in our country equal recognition which has long been accorded it in Europe with the other learned professions, and no body of citizens can contribute to this result more effectively than the teachers themselves.

Education in America is a state and not a national function, each commonwealth being free to devise and conduct its own system. In the absence of a centralized education authority as in Argentina, France or Prussia, it devolves on the teaching profession to organize the intellectual ideals of the time and to direct public opinion in educational matters.

It should be one of the most important functions of the N.E.A. to adopt our system to the rapidly changing social, industrial and economic needs of the time.

Change plans to time

I do not mean that this body should be merely a clearing house for the fads of professional educators of merely

NEWSPAPER ARTICLES

national fame, but that it shall give approval to the soundest educational opinion of the country.

It has become evident to many thoughtful persons that the curriculum of the past generation must be modified to meet the needs of the present and future. The passing of the frontier, the growth of cities and the increase of specialization in every department of human endeavor have rendered changes inevitable. The traditional ideas of education placed the main emphasis upon culture and scholarly attainment. The modern practice adds to this the vocational motive and a vital interest in human welfare.

Dr. Montessori talks

Dr. Montessori spoke on 'My System of Education'. She said:

My system is to be considered a system leading up in a general way to education. It can be followed not only in the education of little children from 3 to 6 years of age, but can be extended to children up to 10 years of age. It is not a simple theory, but has been experimented and put into practice. Its results constitute a scientific proof of its value.

The fact on which it was possible to establish my system is the psychologic fact of the 'attention' of the child intensively chained to any exterior object or fact which proves in the child a spontaneous although complex activity of its entire little personality. When you have solved the problem of controlling the attention of the child you have solved the entire problem of its education.

Concentrate attention

The importance of a scheme to concentrate the attention is self-evident. Professor William James, the renowned authority on psychology in America, points out to us how there exists in children that exterior variability of attention that makes it so difficult to give them the first lesson. The reflective and passing character of the attention by which the

CALL AND POST

child seems to belong less to itself than any other object that may attract its first attention is the first thing that the teacher must conquer.

The ability incessantly to recall a wandering and scattered attention always ready to vanish is the real root of judgment, character and will; that system of education that succeeds in bringing this faculty to the highest degree should be the ideal and standard system.

To be able to choose objects that will interest and hold the attention of the child is to know the means of aiding it in its mental development.

Means of development

All things which naturally arise and hold the attention with considerable steadiness are those which represent a 'necessity' for the child. Toward these things its attention is directed in a natural, almost instinctive, way. All other things that attract its attention do so only lightly, transitorily and for a very short period of time.

Since a constant psychic reaction is an established fact, it is possible to determine some stimulating reactive agent or object that can aid the spontaneous development. The character of this reaction itself must be the guide to the choice of these objects, which are to constitute the implement or tool for this scientific work.

* * *

Other speeches and some discussion followed but no further words of Dr. Montessori are recorded.

Articles from *L'Italia*

Introduction

The articles began on 5 August 1915 and ended on 2 September. Nine of these are translated here:

<i>Article</i>	<i>Date</i>	<i>Topic / Content</i>
First 345	Monday, 9 August 1915	In this article, the eminent and famous lady explains how she came to discover the educational method and how from a medical doctor she became an educator.
Second 349	Wednesday, 11 August 1915	Interesting episodes which reveal the sagacious mind of this famous educator and pedagogue; experiences of the first tests with little mentally retarded children of Rome.
Third 353	Friday, 13 August 1915	Studies of illustrious educators about impaired children; a series of studies from happy and fortuitous experiments.
Fourth 356	Monday, 16 August 1915	One interesting experience of the illustrious educator with deficient children.
Fifth 360	Wednesday, 18 August 1915	The noble Mrs. Montessori knows how to bring the education of children into the field of science. She knows

L'ITALIA

<i>Article</i>	<i>Date</i>	<i>Topic / Content</i>
Sixth 363	Friday, 20 August 1915	how to awaken in the soul of the child the man who is sleeping there. The wise Italian educator speaks today of the two principal forms of slavery destroying the school: the desk and the teacher.
Seventh 367	Monday, 23 August 1915	How to maintain discipline in the school even given the maximum liberty of the children; a nice episode which shows how we should not interfere in the free actions of the little ones.
Eighth 370	Wednesday, 25 August 1915	The new concept of discipline: we ought to teach the children so that they do not equate good with immobility and bad with activity.
Ninth 373	Saturday, 28 August 1915	The child must be educated to the school of liberty and independence; mothers should not consider their creatures as the equal of puppets but as creatures who will grow up to be the men and women of tomorrow.

Notes on the translations of the articles

L'Italia published the following on 5 August 1915:

The Education Course of Dr. Montessori started yesterday at the Exposition

An enormous crowd was present at the revelation of the new method thought out by the gentle and cultured Italian lady

NEWSPAPER ARTICLES

which has brought a true revolution into the instructional educational systems

The commentary describing the picture accompanying the article was as follows:

The celebrated Italian educator, while she shows a girl one of the objects of her didactic material, as an essential part of her method and which cost her many years of study and experience. As we explain in this article, it is not Madam Montessori who is teaching the children directly. This kind of teaching is done by teachers taught by Montessori. The picture reproduces the exceptional way she deals with Katherine Musanti for a few short minutes. Katherine is a true angel of a child, full of intelligence and sweetness and is daughter of the great and popular Dr. Musanti and his wife who assisted at the beginning of the course.

Next came the introduction to the series of articles written by Maria Montessori:

Today we start a series of articles Dr. Maria Montessori genially wrote for *L'Italia*. In these articles, the noble lady will give a concise and clear explanation of the method of education invented by her with such love and perception that in a short time the world makes her famous and proclaims her meritorious to humanity. We are proud of this collaboration and we are all extremely happy to introduce our readers to this eminent fellow-countryman to whom Americans – we have to do them justice – gave such a welcome as never was given to a lady of this or any other country coming to San Francisco.

Besides the beneficial work done by her to renew the system of education and instruction prevalent in our modern society, Dr. Montessori is all the more admirable because of the example of abnegation given by her when, in order to dedicate herself to this holy educational mission, she gave up a brilliant career as a doctor in which she had achieved true triumph and from which she could have received great moral and material compensation. She speaks of this in the first article without false modesty and without boasting. Her example is of the

L'ITALIA

person who commands respect and admiration from all and explains the degree of pleasantness with which Montessori is surrounded in Italy, in other European countries and countries in the new world. Her book¹ which speaks about this method was translated in a short time into nine (9) languages, including Japanese. Schools with her method exist already in England, Russia, France, Spain, Germany, Switzerland and in the United States where over 130 schools are already instituted and directed by American ladies who went to Rome purposely to learn the Montessori system.

Now, let us give you the words of our eminent educator and collaborator and we recommend that all our readers, especially lady readers, mothers and spouses give the greatest attention to what the learned madam writes.

How the idea developed

The House of Children opened yesterday (4 August 1915) at the Education Palace. The House opened to a young generation, to a new science, to teachers and to mothers. The child, a complex nature in development, includes a childhood nature which in itself is our past and our future. The child entered the exposition good and smiling, with a virgin mind whose 'I' is free through the works of this great Italian educator, Dr. Montessori.

A crowd of teachers and mothers, of the curious and of learners observe from outside (the windows) of the House of Children the first lessons which Miss Helen Parkhurst delivered to dozens of children.²

'Delivered' is not the proper word because the children freely act, freely think, as soon as they experience a word which stimulates their activity, disciplining them toward a specific concept, one given psychological act as the first step towards the acquisition of specific mental and moral attitudes. The children were cleaning furniture or playing with special objects invented and built with the purpose of developing a fixed sense of them, intended to sharpen one fixed perception of them without coercing the children's liberty.

Mrs. Montessori stayed outside the House of Children during the lesson, observing what the children were doing with an

NEWSPAPER ARTICLES

intelligent, maternal eye. The lessons will take place from 9.00 a.m. to 12.00 p.m. The children participating number thirty, the eldest being six (6) and the youngest four (4). These thirty children were chosen from 2,500 whose parents requested to be admitted to the House of Children.

1. This book is *The Montessori Method*, published in English as translated by Anne E. George in 1912, then published by Schocken Press in the United States in 1964.

2. The actual number of children enrolled was thirty (30), chosen from 2,500 applicants.

Article 1: 9 August 1915

Through what an idea this (view of children) came to be practiced

It was this child whom I met, knew and examined in the (psychiatric) clinic where I found myself confronted with the puzzles and important problems of childhood. This child presents a vital problem to our society and raises a basic question to us because the child of today is the man of tomorrow, that is, the future society, the world which we will not see, the humanity of the future.

The children I saw were children of the working people of society, the poor children who were passing through the white-walled 'walk in' clinics, like a suffering swarm. It seems these children, whose tortured flesh on their small bodies was suffering with illness, seemed to be inhabited by a ferocious smiling evil destiny, incubating, as it were, all the sicknesses present within the womb of society. But, (more specifically) the children who attracted my attention were the idiots, the imbeciles, the epileptics who were in the psychiatric ward of the mental hospital of Rome.

My grade (type) of job at that time in Italy was never carried by a female. I was the assistant in the psychiatric clinic, helping the professor teach medical students how to examine the crazy children. I was the editor of the special bulletin which was printed about psychiatric illness. The job entrusted to me was to make known through this bulletin the most modern studies being carried on in the world about nervous and idiot children. These children were not the most interesting focus of the experts in psychiatry. At that time, the kind of experiments which represented the maximum progress in healing such sick children were experiments repeated everywhere through treating the thyroids of sick patients. Experimenters thought that many of the mentally ill who had goiters had lesions in the thyroid gland.¹ It was thought that because of these lesions the thyroid gland was functioning insufficiently and that the preparation of thyroid extract might bring about marvelous effects in the state of the intelligence of idiot and nervous children.

NEWSPAPER ARTICLES

Naturally, the fact that with medicine the idiots improved in intelligence was satisfying. I was in this way attracted to this colony of children (*colonia dei bambini*) in the psychiatric ward.

Contrary to the other doctors, I was attracted to these children by a more spiritual, almost material interest. The possible cure through the treatment with thyroid did not push me to live close to this suffering humanity. It was, on the contrary, an effect of a totally different kind. One day, when I was in the ward of these children at the mental institution, a newspaper fell from my hands and I noticed with surprise that the little ones came running to pick it up, breaking it into pieces in order that each one of them could possess a little piece of paper. I saw that they were showing the profound and innermost joy from possessing that piece of paper. I thought: how little is sufficient to interest these children, to make them happy. They certainly 'more than others' have need of education, of 'intellectual' help. Vaguely I knew that half a century ago a French author, Edmund Séguin, was interested in studying idiots and he had written a book about their education. I went to find it in the library of the psychiatric ward. Finding it, I read it passionately. I learned from it that the possibility of the education of idiot children existed.

Why then, I asked myself, do we not educate these idiot and nervous children? The answer was easy: these nervous children were in fear of doctor's actions and doctors did their job, performed their actions outside the field of education.

(However,) to cure and to fortify the intelligence of children without education was a useless task. For this reason, the problem of idiot children in medicine was the most neglected one. Between medical doctors and teachers a deep separation existed, a total separation – at this time doctors and teachers never met each other in their respective social work. I made a resolution: to bring to the teachers the cause of the deficient children, saying it was a pure question of education.

Two thousand teachers participated at the Pedagogic Congress of Turin in 1898 where I presented this new and complex infant category. (I described how) step by step these idiot children go from being poorly intelligent to become little moral children; how these deficient children include groups of

L'ITALIA

extraordinary social and anti-social children from which latter come more miserable men of the world. This means the children who are lazy, who are troublemakers and parasites, are candidates for the mental hospitals and prisons. I turned over the moral responsibility of the redemption of these unhappy children to the teachers of Italy. They became the defenders and teachers of these deficient with a holy fervor. These problem children were then transferred from the field of medicine to the field of pedagogy and the work triumphed because that was the true place for its development.

I made, as it were, my institute of deficient. Those sixty (60) children from the mental institution went out one day from that sad hospital of human idiots and were guided solemnly to my school. I picked up my sick flowers from that hot-house which was not fit for them and took them into the garden where they are transplanted. Roman aristocratic women received them with commotion. These were good and generous mothers, enthusiastic lady teachers as well as civic authorities, a big gathering of people standing along the sides of the road. They, with the children who came out of that mental dark place, enjoyed their entrance to a place of life. The number one hotels of Rome offered their buses to transport the unhappy little children, so cruelly affected by destiny in such a way that they were triumphantly received into a place which would recognize the children's civil rights to mandatory education.

To such a school was added an additional class, a class with longer time in which I accepted children who were told they were unable to be educated in the common public elementary school because their mental abilities were insufficient.

My personal teacher, the honorable widow Bicelli, from the Ministry of Public Education of that time, asked me to give a workshop to the lady teachers of Rome about the education of the mentally disturbed.² That workshop became the 'Magistral School of the Rehabilitation Garden'³ and I directed that school for two years.

I stayed two years more to prepare colleagues who gently cooperated with me for the realization of the ideal for the teachers of Rome, that is, the special methods of observation and of education of mentally disturbed children. But I did not

NEWSPAPER ARTICLES

stay just for that. This is most important: after visiting London and Paris to study the practical way to educate deficient children, I gave myself to the teaching of these children and to guiding the work of lady educators of mentally disturbed children at our institute.

But, more than an elementary teacher without any time schedule, I was present and teaching the children directly from 8.00 a.m. to 7.00 p.m. without interruption, leaving my medical career behind me for this voluntary task without compensation and for the only pleasure I could see, realizing my burning dream. But these two years of practice were my first and true titles in the field of pedagogy. Often in commitment and sacrifice there exists the unknown start of a future opportunity.

1. Montessori's actual words are: '... tra i deficienti, avessero una lesione nella glandola "tyroide" (gozzo) le quali in essi funzionava insufficientemente e che dei preparati di "tyroide" potevano dare effetti meravigliosi ...'

The text suggests that idiot and nervous children were children who also had thyroid deficiencies and, thus, goiters and that 'preparations of thyroid' were used with such children bringing about the 'betterment of the state of their intelligence'. Two questions arise from this comment. First, does this mean that many of the idiot and nervous children were children who had goiters and vice versa? Secondly, where did Montessori find these studies which she published in the 'special bulletin'?

Currently, this editor has addressed these questions to Dr. Sylvana Montanaro, M.D., presently the Directress of the Montessori Infant Center Home in Rome, Italy, a lady who has written several books and articles on Montessori and her work.

2. The Italian is: '... del fanciulli frenastenici ...'. The first part of the word 'frenastenici' comes from the Greek *φρενεις*, literally, *mind*. So, these children are 'phrenetic', that is, *mentally disturbed*, or *mentally stirred up*.

3. The Italian is as Montessori writes it: 'Scuola Magistrale Ortofrenica'.

Article 2: 11 August 1915

An interesting episode which reveals the sagacity of the illustrious pedagogue: the remembering of the first test among the little deficient of Rome

The text is preceded by editorial comment:

Today we are going to publish the second of this series of articles that Professor Maria Montessori wrote for *L'Italia* in which the illustrious lady will give a succinct and clear explanation of the method of education discovered by her with such love and perception and which has made her famous in a short time in all the world, declaring her to be a benefactor of mankind. We are proud to collaborate with our eminent fellow Italian and we are most happy to publish and make known to our readers this Italian lady to whom Americans – we need to do them justice – have given such a welcome as has never been given to any other lady of this or of any other country who has visited San Francisco. We suggest that all of our readers, especially our lady readers, mothers and their spouses pay great attention to what the learned madam writes.

The actual text then follows:

In the Institute of Deficients, founded in Rome in 1898, I collected sixty children taken from the psychiatric facility (*dal Manicomio*) – idiots, imbeciles, epileptics, the paralyzed – and about forty children who were refused by the public schools because of mental incapacity or bad behavior (*per cattiva condotta*). By the law existing at that time in Italy, these children were left completely abandoned by society. These children had repeated the same class for three consecutive years or were rebellious to all corrections, so they were thrown out by the schools and were not allowed to be accepted in any public school within the kingdom of Italy. For this reason, the most dangerous individuals were exactly those who remained without any education, and society unconditionally refused them from the only place where they could find any hope of salvation. These children, mainly very poor, persecuted by parents

NEWSPAPER ARTICLES

lacking the patience to tolerate their mental and moral incapacities, already had this mark of public disregard which closed them off from the social places common to all other children, stronger and healthier and, consequently, more fortunate than they. These children started at an early age preparing themselves to be parasites or criminals. I also accepted five or six who were living on the shore of the Tiber river and who were becoming obedient to gangs of rebellious older children. Then, when they were in danger of being discovered, the older children disappeared and only these little ones remained to receive scolding and punishment for all of them.

These gangs became the school for these little children.

One of the principal worries of the time was the moral question within the school and people studied the means to prevent such criminality with the help of the public schools.

In my Institute, there were different categories of children and this offered the possibility of testing various treatments for such behavior.

When these little criminals from the street arrived in my school, they were received with a big feast and they felt themselves to be wanted: no one controlled or oppressed them. They came into school and started to work, selecting whatever activity they wanted. What I focused on was to fill up the school with attractive things. I organized various kinds of work (a most beautiful girl helped me in a marvelous way) and put study into the form of active exercises, as I will explain. I was like a Turk in a bazaar who waited anxiously for the client.¹ When he saw the client enter, he covered him in compliments. He followed him everywhere, always full of desire to grab him. He exaggerated the value of his merchandise, showed it to the client, then waited for the fortunate moment in which the client is interested in some object in a firm way. Then he pushed the client to buy it. Similarly, I, in an indirect way, pushed the children to be clients in my school bazaar, to enter freely, to look at things and ... finally to buy something. Whatever they grabbed, whatever activity they would choose, I accepted their choice with expansive benevolence. So it happened that, freely exercising themselves, they occupied themselves with much intensity and little by little, they developed better attitudes to an accustomed task.

L'ITALIA

Perhaps, one of my most original experiments was to teach grammar.² It was one of the more joyful exercises, full of noisy joy. Even if it is not possible here to give a detailed description, perhaps little hints will not be in vain. To teach the noun, I gave the concept of 'call' (*dato il concetto della 'chiamata'*). It was with the *name* (noun) that we *call* (I told them) – without the *name*, everything is useless to distinguish houses and persons.

In such a way, I put myself in their midst and with passionate voice and dramatic emphasis, I said: 'Come, dears, come close to me. Do not delay. Hurry. Come. Oh, good. Oh, beautiful. Oh, sweethearts'. Everyone was coming toward me, hesitating, but without calling a *name* who would come?

They said to me: 'Whom are you calling? What are you saying?'

Otherwise I said: 'Bring me red' (*portandami rosso*). Immediately one child brought me a red pencil in his hand. 'No dear, I did not ask for a red pencil'. Another child brought me a red piece of paper. 'No dear, I do not want paper'. One child came with a piece of cloth. 'But, you know, I did not ask absolutely for a piece of cloth'. 'Behold, here is a rose', said a child triumphantly, bringing me a rose. 'I am sorry, my little one, but I have not asked for a flower'. 'But, then, what do you want?', the children asked, laughing with shining eyes, 'What do you want?' 'But, if I did not say a *noun*, how can you know what I want?', I asked them. 'I wanted my red apron'. Then the word 'apron' fell on them like April's rain refreshing the little grass in the field. They remained so happy and enthusiastic in such a marvelous way. Every one of them was going to look for my red apron. Then they wrote the *nouns* they discovered on little cards and put them in a box with the title 'nouns'.³ That box was the start of a grammar book, but was not any more a book.

1. Montessori uses a street metaphor which was popular at that time. It corresponds to one we might use, such as: I was a thief in the port; I was a gangster at the flea market.

2. Some knowledge of the Italian language as phonetic and inflected is necessary to understand these 'little hints' Montessori offers of her method of teaching, but more necessary is that we understand how the American way of teaching differs from hers. Two items of instruction are essential and basic to

NEWSPAPER ARTICLES

the American way of teaching: textbooks and lecture from the front of the room to provide answers. Both are antithetical to Montessori's way of instruction by way of the children's discovery. Montessori moves into the group of children and she does not use textbooks. Rather, she uses vocal language related to real objects the children may handle and carry.

The example she uses is unique to Italian. In order to teach the children about the *noun*, **nomen** in Latin, literally, *name word*, she asks the children to bring her 'red'. But, the Italian **rosso** is an adjective, meaning *redness*, not a noun and 'rosa' is a *noun*, phonetically sounding the same (perhaps Montessori had even placed a 'red rose' in the classroom when she prepared the classroom environment for this grammar lesson). Thus, initially the children respond to the sound of the word, not the meaning of her instruction about *noun* and bring Montessori various 'red' things, but she rejects them all. Why? Well, the children did not ask her 'what' she wanted which 'was red'. They merely ran to grab whatever was red. So, after they become curious as a result of all her 'no's' – perhaps, even frustrated – she says she wants **grembiale rosso**, that is, a *red apron*. The children run to retrieve her red apron and, in the process of this interchange learn the difference between the *noun* and the *adjective*, without reading about that difference in any textbook. Then she provides them with a 'box' labeled **nomi** (*nouns*) wherein they might place the cards on which they write various and sundry nouns. So, the children even make up the curriculum for learning grammar.

3. The fact that these Italian children moved from spoken words to written words also points up a radical difference between any inflected language (be it Latin, Italian, Spanish and so forth) and English. As it is a non-inflected and non-phonetic language, English speakers do not have the intrinsic language facility to move from spoken to written English as these Italian children did and do. Even though the Italian **rossa** and **rosa** sound similar, both are phonetic, and yet they differ grammatically, as Montessori taught the children.

Article 3: 13 August 1915

**The study of the famous educator about deficient children:
a series of happy and fortuitous studies and experiments**

I came to know a child about six (6) years old who was not talking (*non parlava ancora*), but was not dumb (*non fosse sordo*). His mental activities, however, were so slow that articulation¹ of language was not yet developed in him. After I had tried with enormous efforts to call his attention to the sounds of words, pronouncing clearly and loudly short and simple words indicating objects, I thought that I would try a risky step, that is, I thought that I would teach him how to write. I prepared an enlarged letter of the alphabet in a piece of wood, painted on big panels and lastly letters carved in thick wood. I guided the hands of the idiot to follow the configuration of the letter, touching it in the way it was written while pronouncing its simple sound. Surprisingly, I discovered that the child did not know the letters by looking at them, but recognized them (after feeling them).

I then stopped for the moment (trying to get the child) to articulate the language. I tried to get him to recognize the written language through the sense of touch. So, I succeeded in making him recognize the words and getting him to write them. The result was that the calligraphic writing of this child was most perfect. It was through these exercises (of outlining letters and of writing words) that the child learned how to speak and reached the point of reciting a small poem.²

Therefore, there is a greater facility in writing than in speaking. So, for this reason, the movement of the hands which followed words are rougher and simpler than the complexity of the movements of the lips or of the vocal cords which are necessary to the pronunciation of the words. When there are some difficulties in developing the articulated language, it is easier to stimulate³ the writing of words than the speaking of words.

Besides that, the writing of words permits the child to stay longer on the analysis of words. (Also,) single sounds of the alphabet can be pronounced in details, in such a way as to prepare for the most difficult articulated language.

NEWSPAPER ARTICLES

It is interesting that until this time, writing by the hands was considered more difficult than the articulation of words and, consequently, more difficult than the reading of words. It was in such a way that I established a new method to teach children how to write. This way consists in preparing directly the movement of the child's hands in writing, outlining big material alphabetic letters as objects by touch. Today, this method with many modifications serves to prepare the mechanism of writing with normal children from four and a half years of age. This method of preparation is also used for normal little children, a precious method to make perfect their articulated language.

I did one other very simple experiment, very rich in consequences with an idiot girl, thirteen years of age. I attempted in vain to teach this girl the simple action of passing a needle from top to bottom, bottom to top on a piece of cloth through what is called *infilsetta*.⁴ Losing hope of succeeding directly, I showed⁵ the big girl sets of paper of various colors cut into thin strips and laid out on the table next to each other. Then, I taught her to pass a wooden stick through these lines of colored paper continuously under then over, set by set. This was the same type of activity (as working the needle from top to bottom, then back from bottom to top) but was a much rougher kind of activity. As soon as she did this exercise (passing the stick alternately below then above the consecutive strips of paper lying in rows next to each other), the girl started to sew.

It was in this way that I prepared many cloth frames, reproducing in a magnificent way the form of various connectors which we use to keep our clothes all together, buttons, clip hooks, belts, connect hooks⁶, and so forth. In such objects, so big and easy to be seen, the idiots exercise themselves very easily and after this, they learned how to dress and undress themselves, to lace their shoes and to tie and untie their shoes, to put on neck ribbons (for girls) and to put on neck ties (for boys), and so forth.

It is with direct exercise of the hands and with the help of the sense of touch that ear and eye can be educated. A bigger door to the entrance of ideas was revealed to me.

L'ITALIA

1. The Italian text is '*il linguaggio articolato*'. The Italian word *articulato* technically refers to a physiological process of making a verbal sound for a specific letter of the alphabet, then for a specific word.
2. Indeed, it is sad to find the truth of the age-old statement, 'those who do not know history are condemned to repeat it'. Montessori established scientifically that the natural cycle of learning is through writing to reading because writing is based on the basic sense of touch whereas reading depends on a removed sense of touch through hearing. Yet, even today, public schools in America insist on emphasizing 'reading' first, even though national programs disregard writing, or, at best, relegate it to second place.
3. The Italian word is *provocare* literally, *to call forth*.
4. *Infilsetta* is untranslatable.
5. The remainder of this paragraph does not translate the Italian literally; however, it does transliterate literally the activity which Montessori describes by using the Italian word *infilsetta*.
6. These 'connect hooks' were similar to what today we call 'zippers'.

NEWSPAPER ARTICLES

Article 4: 16 August 1915

Some interesting experiences of the educator with deficient children

The education of sense¹ is of great interest. What is commonly called the education of the senses consists in attracting attention through simple objects which above all make evident only one quality, for instance, a color, a dimension, a form, a sound, a rough feeling, a smooth feeling, and so forth. This makes observation simpler and, in the meantime, allows the possibility *to analyze*² various and different qualities of bodies³, not in a dry and abstract way – but through interesting objects. Now, it is known that the fundamental quality of the intelligence 'is the ability to distinguish things one from another'.

To distinguish is, therefore, the characteristic word for intelligence, as *to play* (*suonare*) would characterize the pianist, as *to talk* (*parlare*) would characterize the speaker.

To distinguish means not to mix up. *Mental confusion* is exactly the opposite of *clear intelligence*.

What is called the *education of the senses* leads us to distinguish the most precise analysis which is exactly the exercise *fundamental to the intelligence*.⁴

Nothing is more interesting than to try to educate the senses in abnormal children precisely because they have the greatest mental confusion, the most specific difficulty in distinguishing things (*le cose*). The one who gets close to a positive examination of this kind of problem will find the most incredible surprises.

The deficient children do not 'perceive' things well – they confuse a triangle with a circle – they confuse the green color with the yellow, and make similar mistakes. The popular saying, that is, to confuse white with black, is here literally true.

Let us imagine what could happen to a mind which builds its ideas upon a foundation of perceptions so mistaken. Evidently this intelligence would take from the exterior world materials so mistaken that it would make for itself an internal construction totally different from our own.⁵

All children who seem shameful liars are sincere children. Even normal children see things in their own way and are

L'ITALIA

subject to great confusion and illusion during the period when their minds are still immature, but afterward they correct these problems (though not always perfectly). The deficient are not always able to do the same.

The false perceptions and illusions of the mind can remain and be of great or small relevance in that confusion. Even false ways of reasoning can exist in these weak and abnormal minds. How many times so-called criminality (and, as a consequence, even the criminality of adults) is founded on false reasoning – just as a 'lie' is built on 'false perceptions'.

It was, for example, in my school that one child was considered a criminal. He was always stealing money; he was killing pigeons just to kill them; he was persecuting cruelly his own little sister who was once found tied completely with rope and, another time, was found hanging off the hook of a scale by her own clothes. This child was the son of farmers and lived in a garden area near the 'doors of Rome'.⁶ The boy was always in motion and his movements were disordered (*scamposte*) so that often he would break objects around himself; he was considered a troublemaker. After trying without success direct and strong methods to have him obey, his mother convinced him with words and reasoning to stay quiet without moving. Once, the child happened to listen to the conversation of someone saying that justice required that money be given to persons who were more useful (to society). This principle of justice and the necessity of the other one, namely, for him not to move, penetrated the mind of the boy. Then he started not to correct himself, but to correct others (as many people do). He worked to establish around himself the order which was preached to him. The pigeons were moving more than other things, so he tried every means to get them to stay quiet. But, (failing this), he stretched their necks and laid the dead birds all in a row, one next to the other. Even his little sister moved about too much for him, so, one day he tied her up like a salami. Then, another time, the boy heard a farmer who was weighing an object attached to the hook extended over the scale. The farmer said, 'it is necessary to wait until the movement of the object stops so you can read the scale'. Behold, the little child thought of a practical way to make his sister stay still: he tied her to the hook extending over the scale by her clothes until

NEWSPAPER ARTICLES

she stopped moving. As far as the boy being a thief, he was taking all the money he found at home and escaping to the city. He rode a trolley, giving the money to the trolley drivers because it seemed to him that the trolley drivers who were transporting the poor people from one point in Rome to another were persons who were more useful in the world.

It is easy to find the false reasoning of this small child. His criminality comes from the fact that he had a *defective intelligence* (*veniva da un difetto della intelligenza*). After the examination of the sense, I saw how this child was confusing things in such a singular way. He was confusing sweet with sour, green with turquoise, a pentagon with a circle, and so forth. When invited to put two equal colors, one next to the other in a series of colored strands of rope, he was making incredible errors. He was unable to distinguish hot from cold. When he was punched with a needle, he seemed insensitive to the hurt. Evidently his intelligence was built on 'false' objects and his last stage of development was false reasoning.

But, how can we correct such a criminal?⁷ Evidently, we must try to correct or *heal* his intelligence by putting it in contact with the true (*vero*) sense object and *reconstruct* his intelligence according to the truth (*verità*). This is a long job because it is the *work of* 'education'.

But, how many normal children have the residue of such errors? How many are incapable of seeing the truth (*verità*)?

The *hygiene* and *cure* of the intelligence is needed for all, just as hygiene and cure of the body is needed not only for the sick, but also for the healthy.⁸

1. The Italian word is *sensi*, literally, the senses.

2. Certain Italian words are in italics and bold in the actual article, so this is replicated in the translation.

3. Again, where quotation marks exist in the Italian text, they are replicated in the translation.

4. The Italian is: 'un esercizio *fondamentale dell'intelligenza*'. *Della* means 'of'; however, in English I render it 'to' so *fundamental* sits next to *intelligence* as in the Italian.

5. An example drawn from construction is useful here. If, for instance, one were to build a home out of bricks engineered in Europe in the United States, the person would not use plans drawn in Europe because the unit of measurement is metric whereas in the United States it is the inch. The extent of the unit of measurement differs. Similarly, a deficient child takes different

L'ITALIA

sense perceptions from the same objects perceived by normal people and consequently builds different mental constructions.

6. Part of the wall which surrounded Rome lines an area near the Tiber river and between that wall and the river the poor cultivated gardens so they might have food. The wall had some openings which were originally 'gated' and the people referred to them as 'the doors of Rome'. It was here that the young boy lived as one of the homeless.

7. Notwithstanding the abundance of studies showing the large percentage of prisoners within the adult and juvenile justice systems who lack basic education skills, both justice systems still persist in punishment for crime rather than education for rehabilitation.

8. Implied throughout Montessori's method of education is the attitude she states here in such a forthright manner. Montessori looks upon the intellectual and spiritual well-being of the child as she looked upon the child's physical well-being, namely, as a medical doctor. The health of the child and the cure of a child's illness were two sides of the same medical coin. Whereas educators treated the child's mind and medical doctors treated the child's body, Montessori, on the other hand, treated both simultaneously eighty-two years ago. It is ironic that medical hospitals in the United States are in 1997 beginning to treat both; indeed, doctors in some medical pediatric hospitals are issuing prescriptions for a child's reading as well as for pills!

NEWSPAPER ARTICLES

Article 5: 18 August 1915

The noble lady came to bring the education of the child into the field of science; she knows how to awaken in the soul of the child the man who sleeps there

When a thing does not exist, it is very difficult to see inside and to believe in it. I read one day in a holy book this phrase:

To become useful in life consists in understanding what the thing is which is going to be realized at that moment and that one of the principal characters of 'this thing' is that it is not triumphant, instead, it is depreciated, humbled and is not listed in the glorious acts of social work.

The story of my studies and of my work demonstrates this truth. I studied medicine and perfected these studies. I succeeded in passing the test which offered me this means. I dedicated myself to most difficult studies, namely, psychiatry and was admired by everyone.

It was the triumphant thing to do at the time when I was taking care of the deficient and I went to study the methods of their education in France and England.¹ Then I returned to Rome. I experimented at the Institute in which I put deficient children who were in the mental facilities and in the streets of the city. All that seemed marvelous and lit a fire of enthusiasm in all of Italy and elsewhere.

But, when I was with the deficient, I did not do what everyone else was doing. I was living with them; I spent all my vacation with them; I stayed with them day and night, observing them in all their work and in their recreation. This behavior of mine was not appreciated.

The doctors of that time, my colleagues and companions in study, were judging: it is not right for a lady to be in these situations. These situations do not conserve the dignity of being a doctor.

When I placed myself as a teacher to teach the deficient how to read and write, the infuriated doctors said that I was denigrating their art. I, a doctor, was dressing myself as a teacher and this should not be done by someone who had the

L'ITALIA

profession of a doctor. Yet, rather than doing such elevated and respectful things as educating children, these doctors found dignity in taking care of microbes, but they did not think it dignified to care for human beings. It was then I convinced myself that what they found degrading was what did not yet find its way into science, I mean the interior life of the human being. For that reason, they provided all kinds of help and consideration for criminals as objects of science rather than for children whom they found to be more degrading and unknown.

From Rousseau and Froebel

It is true that the greatest educators of the world were seeking to bring education of the soul of the child into the field of science before my time. Rousseau, the great French philosopher was the first to conceive this idea. But, unfortunately, his studies remained in the field of theory and were never brought to practical application. Even Pestalozzi, the well-thought-of educator whom we all know and admire, introduced marvelous principles into this new field of education and introduced a true method of education which he himself put into practice. But the method and its practice brought results very far from those which the theory promised and the Pestalozzi method failed as a result of too much mechanism and pedantry. It could not free the child from scholastic slavery nor, even more, from annoying results.

The same Froebel, whose education of children was so pure and so meritorious, badly applied the clear merits of his system and did not give his method a true application and practical solution because his method became too systematic, too mechanical and parroted without meaning. What is worse, he skipped the faculty of the child's will, compressing and distorting it with rigid discipline.

After having done a very accurate study of the errors and successes of my predecessors in the field of education, I brought to practice by myself the results of my own studies and my own enquiries. I exercised myself for a few years in what is more important, namely, the work of a teacher. I applied special attention to preparing teachers with full knowledge and conscience in the use of my system.

NEWSPAPER ARTICLES

The application to normal children

What was the reason which pushed me to the application of these methods even to normal children? While I was attending passionately the education of deficient children, I discovered that each part of my system was very adaptable to normal children with the same efficacious results. This method had nothing special for the instruction of idiots, but contained a principle of education more reasonable than those in use. Such a method could even enlarge and develop an inferior mentality.

Such a divine intuition became 'my idea' after I abandoned the school for deficient. Little by little, I became convinced that such a method applied to normal children and would develop their personality in such a wonderful and surprising way. After all, what are the normal children of a certain age, if not deficient compared to those who have developed as they have grown older?

I made another important discovery, namely, the happy result we witness that my system gave to normal children. The old system of education guessed what things educated little children by lowering itself to their levels, often playing with them and, from time to time, reading them stories. I, on the contrary, had the happy intuition to call and awaken the man sleeping in the soul of the child. It was frequently said that the didactic material invented by me formed the basis of my educational system. I, however, recognized that it was not the didactic material, but my voice calling and awakening the children which sent them to use the didactic material so they could educate themselves.

This, in the last analysis, is the true secret of my system of education.

1. Montessori went to Paris to study the works of Séguin and to London to study the work of Etard.

Article 6: 20 August 1915

The learned Italian educator speaks today of the two principal kinds of slavery which are negative and destroy the school: the desk and the teacher

I already explained, in the preceding article, my first experiences and applications of the new method of education with deficient children and how I got the idea of applying it to normal children while I was proving the system worked. I realized that the above method had nothing special to make it adapted only to deficient children.

It was in this way that, after having consecrated a few years to children to whom nature was a stepmother in their mental faculties, I dedicated myself to the education of children with normal mentality, starting with those in kindergarten.

The fundamental principle of my method is to leave to children the widest individual liberty in order not to impede in any way the spontaneous development of their actions. This system was applied before me by well-known educators but without permanent and satisfying results, mainly because the system did not create the conditions, that is, an environment in which the liberty of the child could manifest itself in a satisfactory manner. In other words, the system lacked the appropriate atmosphere to have the liberty of the child translate into an interior formation and spiritual growth.

When I talk about an unlimited liberty of the child, I do not want to be misunderstood. I do not intend to say that the child must be completely abandoned to himself and his resources. But, we must exercise toward the child only a rational care focused on the creation of an environment wherein the child's liberty can be largely developed, that is, by abolishing any restrictions which may impose any kind of slavery on the child's body or spirit. For this purpose, I began by abolishing the most evident and material form of slavery afflicting the child within the school: the desk. This desk represents the maximum error of scholastic pedagogy. The desk, ugly and blind, is the place where the school groups children together. It is true that the science of anthropology has improved the formation of the school desk. That science thought that a special form of the

NEWSPAPER ARTICLES

desk would adapt to the age of the child, the length of the child's legs, the child's distance from the teacher's lectern, and so forth, and so forth. But this new desk was perfected in such a way as to allow the maximum immobility of the child, to take away any mobility of the child within the classroom. In this way, the desk grows in perfection for all the guardians of so-called scientific pedagogy, invented as a model not a few nations were proud to adopt. This desk became a kind of 'national desk'.

But I believe that in a short time vigilant people will be surprised and be properly touched by our model desk. They will reread with their eyes books illustrated by such words and pictures focused to this goal, almost not believing that the public schools came to the use of such an instrument of slavery.

The abolition of the desk

One of the first reforms introduced by my system of education was the abolishment of the desk. I substituted little tables with solid and long legs so that they would not be subject to shaking, but they were very light in weight so that two little children of four years of age would be able easily to move them. I also brought in similar rectangular tables so that two children could sit comfortably along the longer side. We used with these tables little chairs made of wood, light and easily movable by the child.

I know already the first objections which arise in the mind of followers of the disciplinary methods of education. 'The children,' they say, 'who move about will throw chairs and desks about and make a lot of noise and mess'. But, this is simply only a prejudice. In the same way, for many centuries, people believed that the newborn child must be wrapped and young children starting to walk must be confined within a container.¹ So, today, people believe that the heavy desk, even nailed to the floor is a necessity in the school in which the child grows into immobility. But we, instead, provide light and mobile chairs and desks which allow the child to choose the most comfortable position. In such a way, the child can accommodate himself. At the same time, these desks and chairs stand as

L'ITALIA

exterior signs of freedom and a means of the child's education. One improper movement of the child makes the chair fall in a noisy way and the child receives evident truth of the error committed and of his own capacity. Yet, this very movement would not be noticed if the child were enclosed in the old-style desk. So, our child has a chance of self-correction and when he corrects himself, he will have clear and evident proof of his capacity. The little chairs and tables will remain silent in their places. At the same time, this means that the child has learned to move himself.

Contrary to the old method, the proof that a child has gained discipline consists in opposite actions, that is, in the silence and immobility of the child. Immobility and silence, however, 'impede' the child from learning how to move with grace and knowledge in such a way that when the child comes to a place where a desk does not exist, it happens that the child throws over light objects. Here, in our method, the child learns self-containment as well as the ability to move and both are useful even outside the school. Even though he is a child, he will be a person of polished and correct action.

The 'desk of the soul'

But one element of the child's slavery far worse than the desk represents a moral slavery. This is the teacher's actions in most pedagogical systems, especially in relation to the way of getting discipline and the way of giving rewards and punishments. To be successful in these, the discipline of immobility is necessary for the teacher. In order for the teacher conveniently to manage the classroom, it is necessary to enforce compulsory activities on the students. So, to enforce such immobile behavior on students who are condemned to be the teacher's listeners, the teacher must use abundantly a system of rewards and punishments.

Such a system of rewards and punishments allows me to call this situation 'the desk of the soul'. I mean this is an instrument of the slavery of the child's spirit. The only difference is that whereas the material desk focuses on diminishing deformative acts, this spiritual desk intends to provoke deformative acts. I

NEWSPAPER ARTICLES

mean that this situation causes moral deformation in the child's soul. Rewards and punishments, as it were, push the child toward learning efforts so we cannot speak of the natural, free learning actions of the child. The horseback rider, for instance, gives sugar cubes to the racing horse before riding it. The wagon master yokes the team of horses to make them pull the wagon according to the way he orders them to act as he yanks on the reins. But no one of these horses so splendidly or gallantly runs as does a horse free on the plain. The cube of sugar and the yoke are similar in that each seeks to dominate the rebellion of the noble animal. They are not a necessary stimulant to get the animal to move. So also here, in this case of education: do we have to yoke the child who is a human being?

1. Montessori speaks frequently of the 'traditional' manner in which people wrapped their newborn babies, Italians, Chinese, even the British in pieces of cloth, inhibiting their mobility and even slowing their blood circulation. Italians also confined young children beginning to walk in half-barrels. Even today, families enclose young children beginning to crawl and walk in so-called playpens. Although such enclosures are perhaps more civilized, they still inhibit a child's self-movement through which the child develops latent abilities and are used more for convenience of the parents or adults than for the safety and development of the children.

She sees the use of the fixed or heavy desk as a similar mode of confinement for the student, more for the convenience of the teacher than for physical comfort or the spiritual learning of the student.

Article 7: 23 August 1915

How it is possible to maintain discipline in the school even when you give the greatest liberty to the children

Dr. Montessori recounts one gracious episode which demonstrates how not to put obstacles in the way of the free actions of the little children.

The article is preceded by this editorial caption:

It is with the greatest satisfaction of Italian journalists that we publicize in these columns of our newspaper the written articles from the renowned Italian educator, Dr. Maria Montessori. Her new method of educating children was received with most conscious applause from all civilized countries of the world, including the United States of America where this eminent Italian lady was received with such deference and respect, surpassing the example of past personalities who came to visit this country. We are happy for the warm reception these articles have received among our readers and we continue this interesting series of articles.

The text of the article follows:

In my last article, I mentioned the two major errors of the actual systems of education: first, the slavery of the school desk, and secondly, the methods the teacher uses to obtain discipline, the pernicious use of rewards and punishments.

Today I will speak about the important question of discipline, remembering how the base of my method is the giving of maximum liberty to the child in the development of his or her faculties and actions. But a natural question already appears: how can we obtain the discipline of free children in a classroom?

Without doubt, we, in our system, have a different conception of discipline. If discipline is founded on the liberty of children, it necessarily has to be active. We cannot say that an individual is disciplined only when the child is made silent artificially (like the dumb) and immobile (like a paralyzed person). Such a person is annihilated, not disciplined.

NEWSPAPER ARTICLES

We call 'disciplined' the person who is master (*padrone*) of himself. As a consequence, he can dispose of himself (as he wants) when some rule of life is needed.

Such a concept of discipline is not easy to understand nor to obtain. But surely it contains another principle of education, a principle very different from absolute coercion and unquestioned immobility.

It is necessary for the teacher to have a special technique to guide the child in such a way of discipline that he can run all his life progressing toward perfection without stopping. Just as a child starting to learn movement does not learn to stay immobile. Such a child prepares himself not for school, but for life in such a way that he will become a correct individual through his habits and activities even in normal social situations. In such a way now, the child gets used to a discipline not restricted to school, but to all of society.

The freedom of the child has to have as a limit the social interest: as getting along with what we used to call education in manners and actions. We, by consequence, should prevent (*impedire*) the little child from doing anything which could offend or hurt others, or what signifies improper or uneducated acts. But for the rest, every kind of manifestation bearing upon useful purposes – no matter what it is and manifested in whatever way – not only has to be permitted to the child, but also needs to be noticed by the teacher: this is the most essential point. The teacher, through scientific preparation, should conquer not only the capacity but even the interest to observe the natural phenomenon (occurring within the classroom). The teacher in our system has to be 'patient' more than 'active'. This patience must be made of anxious, scientific curiosity and of absolute respect for the phenomenon observed. The teacher must feel and understand the position of observer; activity should stay in the phenomenon (that is, in the children)!

To make my idea clearer, I will relate an episode which I witnessed in the school in Rome with teachers prepared by me.

Once the children in the class came together very noisy in the room, surrounding a little pot of water wherein some floating things were moving. A little child only two and a half years was in the class. He alone stayed back behind the others and was excited by intense curiosity. I observed from far away with

L'ITALIA

great interest. First he came close to the back of the group and with his little hands tried to push the others aside. I understood that he did not have the strength to open a passage for himself. Then, he moved back and looked around. I said to myself, the thought expressed on his face was interesting. If I had had a camera, I could have taken a picture of that expression. He saw a little chair. Evidently, he was thinking of bringing it behind the group of children and climbing up on it. He moved with shining face toward the little chair, but, at that very moment, the teacher grabbed the child roughly (maybe 'gently' according to her), lifted him up and showed him the pot from above the group of his companions, saying, 'Come Darling, Come Sweetie, you look too'.

Certainly the child noticed the floating things on the water within the pot, (but) did not taste the joy he could have felt if he had removed the obstacle with his own strength and the vision of the floating things within the pot did not bring him the advantage it could have if his intelligent effort could have developed his interior strength. The teacher impeded the child from educating himself and did the child no good. The child was at the point of feeling victorious, but found himself impotent in the helping arms of the teacher. The expression of joy, anxiety and hope, which interested me so much, disappeared from his face. What was left was the stupid expression of a child who knows how others would do things instead of how he would have done something.

NEWSPAPER ARTICLES

Article 8: 25 August 1915

The new concept of discipline: we ought to teach children not to believe that good equates with immobility and bad with activity

I already have said how my method of education, based on the maximum liberty and independence of the child, has and obtains discipline in a completely different way from those used by past, modern and current systems. My discipline aims mainly not to transform the child into a robot, or to limit – then little by little to suffocate him – all the actions which should not be done (because I want) the child to develop a clear discernment between good (*bene*) and evil (*male*).

This is the starting point necessary for discipline and a most tiring time for the teacher. The first conception the little children ought to acquire in order to be disciplined actively is discerning between good and evil: the work of the educator consists in refraining from being an obstacle preventing the little child from confusing the good with immobility and evil with activity as happens with all forms of past disciplines. Our goal is to discipline all the children's activity to work toward the good, not to immobility, to passivity or to obedience.

A classroom wherein all the children move usefully, intelligently and voluntarily without disrupting (anything or anyone) looks to me like a classroom in which children are disciplined very nicely.

To align children (in desks) as in the common school, to give each child one place is expecting that children stay immobile observers of a fixed order – this should be used later – as the first step of social education.

Even in life it happens that we have to stay seated and immobile to listen to a concert or a conference.

We, as adults, know how a little sacrifice is required.

We even can organize children to dispose themselves in an orderly fashion in their places – trying to make them understand the idea – that disposed in such a way they fit properly, that it is good to stay like that. That the good disposition in the class, that such an assignment of order and calm, then to remain in the seat and be quiet, (all this) must come from a

L'ITALIA

kind of lesson and not from a (verbal or physical) imposition. This is important: to make children catch such an idea without taking much care of the practice is to make them learn and assimilate the principle of social order.

If, after having understood this idea, they get up, they talk, they change place – they do not do this any more as they did before, namely, by annoying others and not thinking about it – but they now do it because they want to get up, want to talk, and so forth. In other words, from that stage of rest and well-known order, they leave to start some voluntary action, knowing that there are some forbidden actions. But they are able to remember to distinguish between good and evil.

The movement of the children from the state of order becomes more and more coordinated and perfect with the passing of days. Indeed, they learn to reflect upon their actions. Now, the observation of the way the children are acting from the first disordered condition to a spontaneous order is the task of the teacher, what she sees inspires her action. This looking is the only way in which she can read and study how to become a good educator.¹

Because the child through similar exercises makes a kind of selection of his own tendencies, at first confused in unconscious disorder of his own actions.

Then the child, conscientious and free, reveals himself, using such practice as comes out of him in an outstanding way and makes his individual difference so marvelous.

The children who continue to stay quiet in their places are apathetic, even half asleep. The other children who move around to make noise, to yell, to throw things and those, lastly, who are going to perform determined actions – like turning a chair around to sit on it facing forward over its back, moving a desk to work on a picture, and so forth – these children reveal themselves as little ones, now a little retarded in mental development, or maybe sick, or retarded in the formation of character, or even intelligent and able to adapt to different things, capable of expressing their tastes, their tendencies, their power of spontaneous attention, even their limits as they get worn out.

The concept of the freedom of the child cannot be simple like the concept which is accepted and proposed for the observation

NEWSPAPER ARTICLES

of plants, insects and so forth. The child may be born with the characteristic of dependence and the individual through society may be tied by ropes to obstruct or limit his or her activity.

But the educational method which is founded on their freedom has to intervene to help the child and the infant to conquer his or her freedom. This means education must lessen the obstacles, the social limits of the child's activity. Then, little by little, when the child proceeds in this direction, the spontaneous manifestations will be more obvious in truth and will reveal his nature. The main goal of education is to intervene in the life of the child in such a way as to conduct the child on his way to independence.

1. Montessori emphasizes two things in the education of children, fixing their attention and freedom of their movement. Consequently, the teacher must observe these children as a scientist observes the results of an experiment, so the eyes, not the mouth are the instrument through which the teacher and the scientist learn and, consequently teach. Thus, the teacher controls through her eyes, resulting in providing the necessary didactic material to the child ready for it or indicating to the child the need for orderly rather than disorderly movement.

Article 9: 28 August 1915

The children must be educated to the school of liberty and independence. Mothers should not consider their children as puppets but as human beings who tomorrow will be men

We cannot be free without being independent. So all active manifestations of one's own liberty from the very beginning of childhood should be directed to conquer dependence. From the very moment little babies nurse from their mothers, they are running in most fortunate ways to their independence.

What happens when the child is weaned? At the beginning, the baby was tied to only one form of nutrition, but once the baby is weaned, he will find hundreds of mush dishes. This means that the child's means of existence are multiplied – as independent, he is able to choose the breast or the mush.

Nevertheless, the child is dependent because he does not know how to walk, to dress and undress himself, to wash himself, or how to ask for something in clear language. Therefore, the child is a slave to everyone.

But, at the age of three, the child could have power and in great part become independently free.

We have not yet assimilated exactly the exalted concept of independence because the social form in which we live is still servile. In an epoch of civility wherein we existed in a servile condition, we could not sprout such a form of life conceived as independent, as in the time of slavery, a dark time for the concept of liberty.

The efficient pedagogical act for children of an early age must be one committed to their progress on the road to independence. Helping children to learn how to walk without help, to run, to climb up and to climb down; showing them how to pick up falling objects, how to dress and to undress, how to wash themselves, how to speak in order to express clearly their necessary needs; helping them to try again to pick up things, all this means that they can satisfy their desires; behold, this is education to independence!

We serve little children but one servile act toward them is not any less fatal than an act which suffocates their useful spontaneous movement.

NEWSPAPER ARTICLES

We think that children are inanimate puppets. We wash them, put food in their mouths, just as children do to dolls. We never stop to think that the child might not do something merely because he does not know how to do it, or because he lacks the physiological capacity to learn how to do it. Without exception, our duty toward the child is to help him to conquer that attitude. The mother who feeds her child without making minimum efforts to teach him how to manage the spoon, to look for his mouth, or at least does not eat herself in order to invite him to see the way to eat, is not a good mother. Such a mother offends the human dignity of her child. She treats him as a puppet when the child is a man entrusted to her care. Who does not understand that to teach a child how to eat, to wash and to dress himself is a greater, more difficult job requiring more patience than if she fed, washed and dressed him directly?

The first labor is the job of an educator. The second labor is inferior and the job of a servant.

The second labor is not only an inferior and easier job, but a dangerous one – it is a job which closes the way to the child's independence and makes obstacles in the development of the child's life – moreover, in addition to immediate consequences this kind of treatment has more serious future consequences. The lord (*signore*) who has so many servants not only becomes more and more dependent upon them, becoming himself a slave, but his muscles become weaker from inactivity and finally lose their natural capacity for action. The mind of the one who does not work and only gives orders in order to obtain what he needs atrophies and weakens.

If one day the conscience of the one served, in an instant of light, would conquer his own independent liberty, he would come to know that he lacks the strength to act. This rule should live in the minds of parents of the privileged social classes!

In so far as help is unneeded, it is an impediment to the development of the natural forces whether in the child or in the man.

Oriental women dress in slacks and European women dress in skirts. But, the first, much more than the second, were educated to immobility, to staying in place. This leads us to the

L'ITALIA

concept that the man, rather than the lady works and the lady does not use her capacity to act; she languishes in slavery. She is not only supported and served, but her humanity is diminished. As a social individual, the oriental woman is trash and is even inferior in all the resources which tend to protect life.

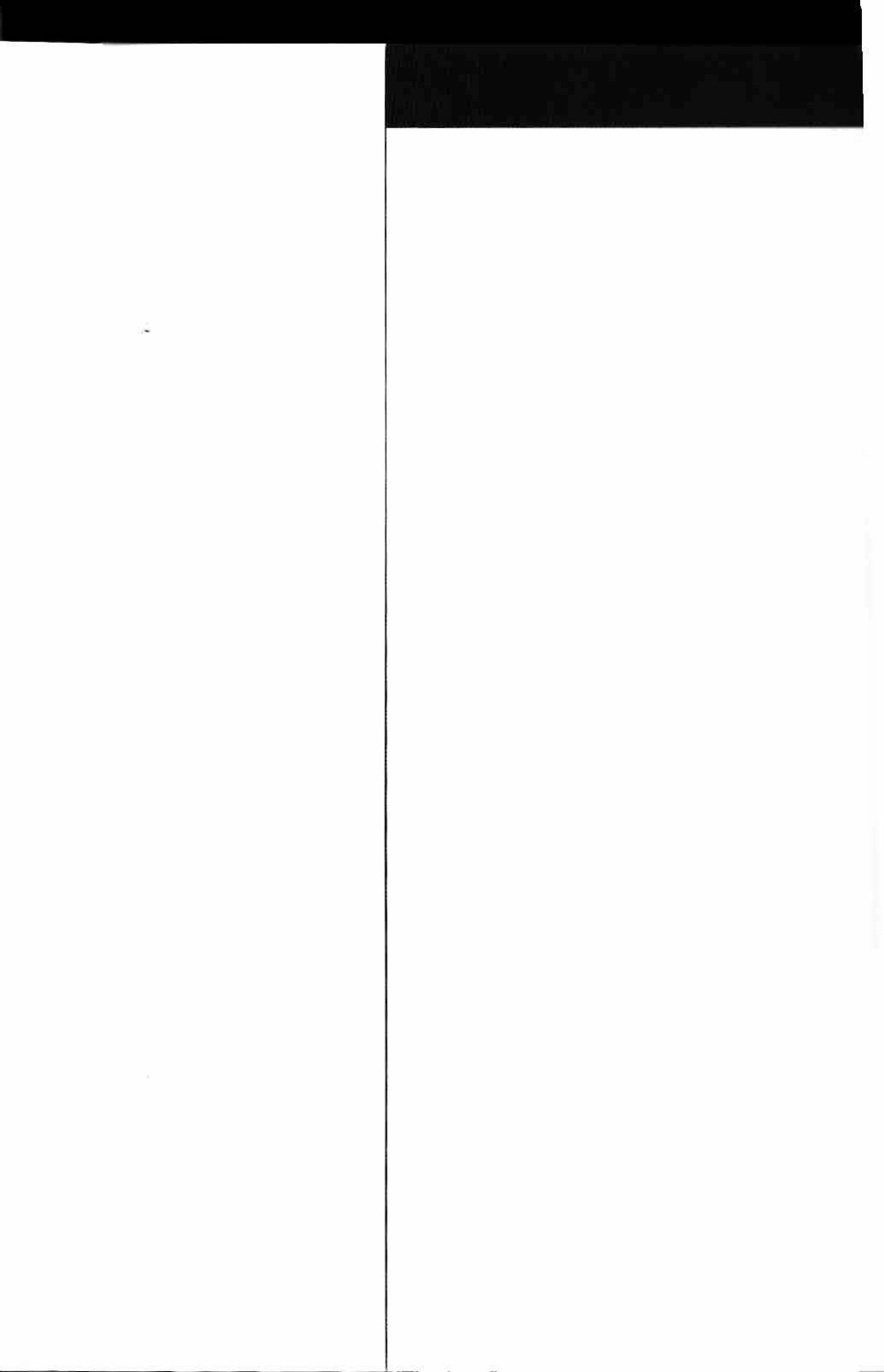
The danger of servitude from independence does not exist only in the 'useless consumption of life' – which guides one to impotence – but in the development of reactions which themselves signify perversion and impotence and could be compared to the crying of hysterical people or to the convulsions of epileptics.

They are the actions of arrogance. The arrogant develop self in a way parallel to impotence. Such is the active manifestation of the sense of one who conquers by abusing others. As a conclusion, therefore, the master (*padrone*) is arrogant toward servants.

Let us imagine a clever and sagacious worker who not only is able to perform many perfect jobs, but is rich in prudence in the office and can direct the business through calm reflective thinking. He will often be the peace maker, the one who knows how to smile when others are irate. It does not surprise us if we come to know that this same worker yells at his wife at home, if the meal is not flavored enough, or if she is not ready to serve the meal when he wants it. He will burn up with fury. At home he is not that sagacious worker. The sagacious female worker is the wife who serves him and sympathizes with him. For that reason, he is a serene man when he is a servant at work and is ferocious when he is served at home. Maybe he would be a perfect man, if he were to learn how to cook.

The man who works by himself turns his own strength into his actions; he conquers himself. He multiplies his own power by perfecting himself.

We teachers have to make generations of people powerful like that, independent and free.



In 1915 Maria Montessori travelled to San Francisco, California to attend the Panama Pacific International Exposition at which she had built a glass-walled demonstration classroom. In this volume we publish a series of lectures she delivered at the Exposition, some lectures she gave elsewhere in California and several articles she wrote for the local press. This book is interesting for those interested in the history of education and the development of Montessori's educational theories and methods.



Montessori-Pierson Publishing Company
Koninginneweg 161
1075 CN Amsterdam
The Netherlands
www.montessori-pierson.com

ISBN: 978-90-79506-43-9

Available in the same series:

- The Absorbent Mind
- The Discovery of the Child
- The Formation of Man
- What You Should Know About Your Child
- Education for a New World
- To Educate the Human Potential
- The Child, Society and the World
- The Child in the Family
- The Advanced Montessori Method, Vols. I and II
- Education and Peace
- Education for Human Development
- From Childhood to Adolescence
- Basic Ideas of Montessori's Educational Theory
- Psychogeometry
- The 1946 London Lectures
- The 1913 Rome Lectures
- The Mass explained to children
- Psychoarithmetic
- Maria Montessori Speaks to Parents
- The Secret of Childhood

Some of the titles above are also available in the Spanish language

Maria Montessori
Maria Montessori